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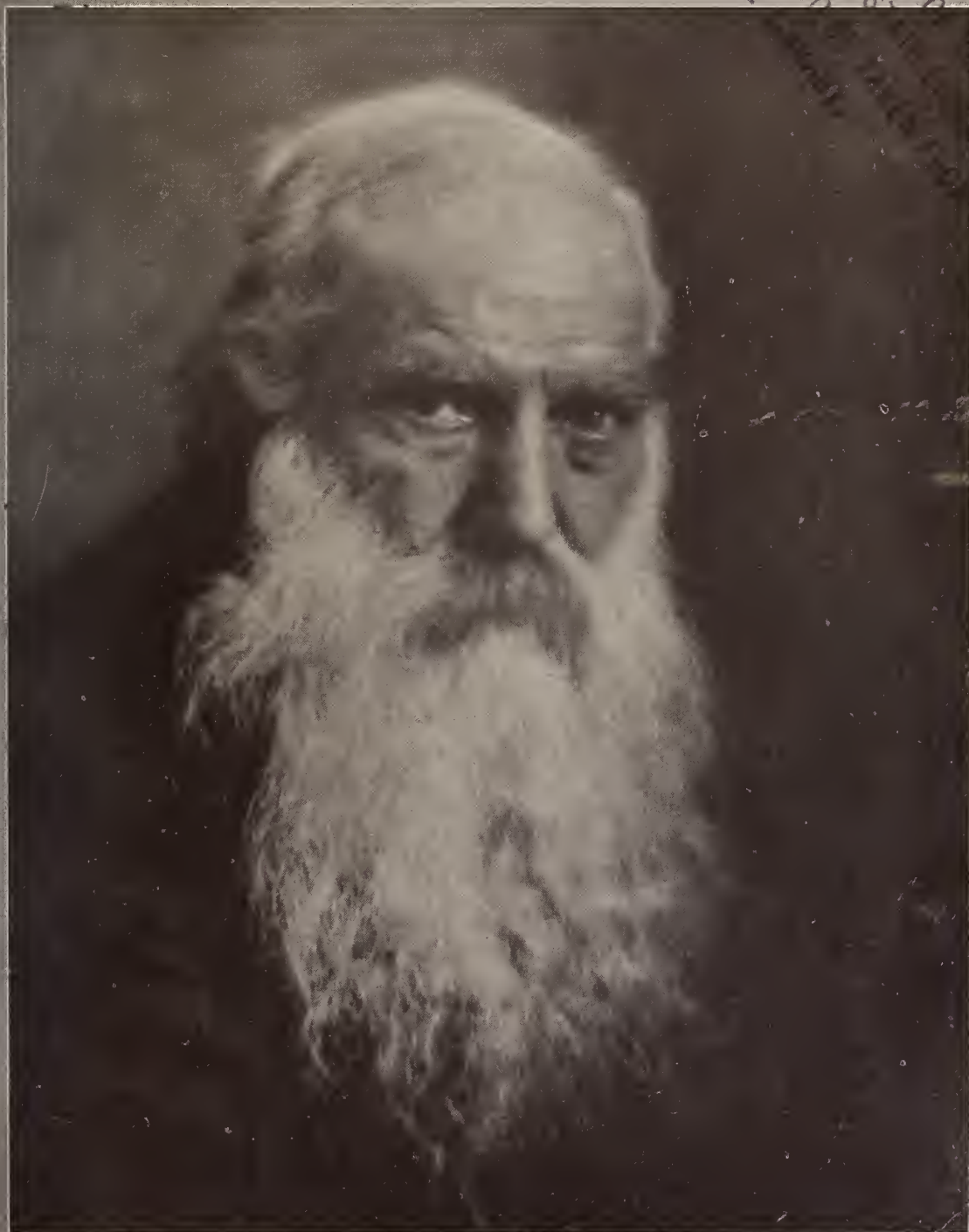
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# PHOTO-ERA

The American Journal of Photography

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PHIL M. RILEY, Associate Editor

KATHERINE BINGHAM, Editor, The Round Robin Guild

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MARIE LEONHARD  
BY WILLIAM SHEWELL ELLIS





# PHOTO-ERA

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JULY, 1916

No. 1

## How I Develop Five Hundred Plates an Evening

ORRIN CHAMPLAIN

**P**ROBABLY one of the most difficult problems confronting the photographer who desires photographic work in quantity, which is sufficiently meritorious to satisfy his artistic sense, is how to systematize his work so that a profit may be shown at the end of the year.

Nearly every one who has attempted this difficult problem has failed on account of the great losses in time and waste of material. As the chain is no stronger than the weakest link, so it is with the three most important working-departments of the studio, i.e., the operating, which includes developing and marking the negatives; the retouching, which includes the proofing and filing of negatives; and the printing, which includes the finishing. Coöperation between these three departments is absolutely essential if one is to realize any eventual success.

In this article I am going to explain how to develop from five to eight hundred plates in an evening.

We have at our studio a darkroom entirely separate from the changing-room. We transfer the different sizes of plates, comprising 11 x 14, 8 x 10, 6½ x 8½ and 5 x 7, to their respective boxes. Each plate is numbered at the time of exposure. In our darkroom we have a sink in the shape of the letter L, with running water from faucets along its entire length. Under these faucets are three separate tanks for the three different sizes of plates most generally used, each of which contains three gallons of developer.

We prepare our developer as follows:

### Stock-Solutions

#### A

Water .....	1 gallon
Potassium metabisulphite . . . . .	2 ounces
Pyro .....	1 pound
Potassium bromide .....	120 grains

#### B

Sodium sulphite . . . . .	Hydrometer test 50
---------------------------	--------------------

#### C

Sodium carbonate. Hydrometer test 30

For use, take 24 ounces of B, 20 ounces of C and 3 ounces of A, together with 300 ounces of water at a temperature not over 60°.

We take the temperature of the developer and endeavor to keep it uniform at as nearly 65° as possible. In the winter we start the developer at about 70°, and in the summer we start it at about 55°, and try to keep it so by the use of iced water and ice. In developing we use a specially prepared holder of aluminum to keep each plate about three inches from the bottom of the tank. Each tank will hold 50 plates. After loading the holders we put them in one at a time, moving them closely together. When development is partly completed, usually in about twelve minutes, we separate the dark from the light backgrounds, having the white backgrounds at one end and the dark at the other. The dark backgrounds should develop from 22 to 25 minutes and the light from 25 to 30 minutes. We then rinse and remove the plates, holders and all to the fixing-tank. In order to handle large quantities of plates it is absolutely necessary to use an acid fixing-bath, which is prepared as follows:

Water .....	4 gallons
Hypo.....	10 pounds
Sodium sulphite, anhydrous . . . . .	10 ounces

When this is dissolved add slowly:

Water .....	168 ounces
Chrome alum.....	10 ounces
Sulphuric acid .....	1¼ ounces

After fixing for twenty minutes, the plates, still in the holders, are washed in running water for thirty minutes. Removed from this water, the plates, still in the holders, are placed upon racks and allowed to dry spontaneously. The only variation from this method of developing is that we develop in the morning after the fifteenth of June and until the fifteenth of October.

We figure that by this method of developing we have saved 33 percent in the cost of our developing-chemicals. Unless there is an extreme variation, it is hardly ever necessary to use any added accelerator or to intensify the negative. These negatives, when developed, will compare

favorably with negatives that have received special treatment, and are far more uniform than it is possible to produce by the old method.

The time required for two men to develop 500 plates is three hours, as each man can watch two tanks simultaneously.

## Increased Hand-Camera Efficiency

JOHN L. WELLINGTON



Y way of compensating its many advantages, the hand-camera has certain inherent disadvantages which may result in negatives that are underexposed, prints that are out of focus and composition that is regrettable — even according to the lights of the user. The lenses are of comparatively short focus, giving small images and wide angles of view, and the shutters are individualistic with regard to their speeds. Of course, there are many varieties of hand-camera. In the present article we will treat particularly the most generally used post-card-size roll-film camera.

The most uncertain part of a camera of this class is the shutter. The lenses supplied are quite satisfactory, but the shutter is often of limited usefulness. The shutter-speeds ought to range from the slowest that you can manage to hold steadily to a fiftieth or a hundredth. The most important of all these is the speed at which the opening and the closing clicks just merge into one sound. That one speed will get your best results. It is slow enough to work with when the light is not brilliant, and will put substance into the shadows; yet you will be able to hold the camera steady for it under almost all conditions. Shutter-speed markings are rarely correct. The actual speeds you must know by their work. But the markings are not of much importance so long as the speeds you require are actually to be obtained. My favorite shutter is an old one whose twenty-fifth has deteriorated to a fifth and whose fiftieth has become the click that will give a fine, deeply-graded negative at F/11 in December sunlight, with something to spare each way. I have another shutter — a diaphragm shutter — marked from 3 seconds to  $\frac{1}{125}$  second, and it is practically useless because, at a point somewhere near the twenty-fifth mark, it jumps from about a fifth to its fastest speed, and the speeds between these are actually lacking; and a trip to the maker has failed to remedy the fault. It is fair to add that I have used several Compound shutters and have had no reason to

doubt the approximate correctness of the markings. For real efficiency most shutters are too fast, and underexposure is the result — not hopeless underexposure, but the annoying, almost-enough kind, that denies you the well-graded negative that affords a print of richer photographic quality.

This kind of niggardly exposed negative, with its consequent overdevelopment, is so prevalent that if you give a fully exposed film to the commercial finisher he is likely to kill it for you. Almost everything he gets requires full development, and he fails to discriminate in your favor. Your film, in consequence, looks like a case of overexposure, when, in fact, it is a case of overdevelopment. The remedy, of course, is to do it yourself, which is the greatest source of efficiency.

The choice of rapid rectilinear or anastigmatic lenses, aside from the question of the difference in price, is a matter to be decided according to the results desired. But be very, very sure that you do not make the mistake of trying to get R. R. quality with an anastigmat. It may sound like an absurdity, but it is not. The anastigmat gives keen definition to the very corners of your negative — which is desirable for cases of scientific record, but which is otherwise undesirable and even unpleasant. So much has been said — quite justly — in praise of the anastigmat that a few words concerning the peculiar merits of the modest R. R. will be pertinent. This type of lens gives very good definition in the middle spaces, where you want it. At the edges and in the corners, where to most eyes extreme definition is an abomination, it is softened. The distances are diffused by having points of light less disk-like than is the case with the anastigmat. If you use stop F/11, a very useful stop differentiating the focal planes in the most agreeable manner, your plane of best definition — all the definition you could desire — shows a fine delicacy that is absolutely unattainable with the anastigmat stopped down. In general, the quality of its image is more pleasing, especially



MISS CHAMPLAIN  
ORRIN CHAMPLAIN





upon enlargement. It has a touch of the quality of the pictorial lens, just a modest hint that might pass unnoticed if it were not compared to the biting edginess of the anastigmat.

Definition, anastigmatic or otherwise, in the wrong place is an abomination. Improper judgment of distances is a prime cause of this fault. This may be on account of carelessness or by the difficulty to judge the shorter distances with sufficient accuracy. The closer the object is to the lens, the more difficult it is to get a sharp image on the film. Twenty-five feet is the most useful distance. There, figures are of significant size, and yet you are able to focus with assurance. With a little care fifteen feet will be easy, and with more care twelve. Closer than that requires keen judgment, or small stops, or measurement, and invites failure.

Inspection of your focusing-scale will make this clear, even if you have not found it out by experience. It is a matter of depth of focus, and depth of focus can be compared directly with depth of field on your focusing-scale. Most of your problems can be solved there in a practical and simple manner. Let us suppose your largest stop to be F/8 (U.S. 4). Then, by easy mathematics, depth of focus, for a confusion-circle of  $\frac{1}{100}$  of an inch, will be  $\frac{1}{100}$  of an inch —  $\frac{8}{100}$  forward of the sharpest focus and  $\frac{8}{100}$  backward from the sharpest focus;  $\frac{8}{100}$  of an inch is a measurable distance. It is about the height of the capital letters printed in this text. Apply this measurement to your focusing-scale — we are presuming that the equivalent focus of your lens is  $6\frac{1}{2}$  or  $6\frac{3}{4}$  inches — and you can work out problems of depth-of-field at a glance. For example, you will find that this measurement is the distance, almost exactly, between the 25-foot mark and the 50-foot mark on the scale. It also measures the interval between the 25-foot mark and the 15-foot mark. This shows that if you set the pointer at 25-feet, the depth will extend from 15 feet to 50 feet. Also, if you set the focus at 15 feet, the depth will extend from a little less than 12 feet to 25 feet. At 50 feet it will extend from 25 feet to infinity, fulfilling the condition for hyperfocal distance.

Of course, the  $\frac{1}{100}$ -inch measure, forward and backward of sharpest focus (for definition  $\frac{1}{100}$  inch, stop F/8), is constant whatever the equivalent focal length of the lens; but it is particularly applicable to those used commonly on  $3\frac{1}{2} \times 5\frac{1}{2}$  and  $4 \times 5$  cameras, because it measures with close approximation the distances between the marks set on the focusing-scales supplied with these lenses, namely: 12, 15, 25, 50 feet, and infinity (usually behind the 100-foot mark). With this convenient fact in mind it is easy to make

due allowance for smaller stops and for smaller circles of confusion.

If you are going to enlarge — and you should, to get the highest efficiency out of your hand-camera — you will find that it is better general practice to mask a goodly portion of your negative. The angle of view subtended by the whole negative is too large. A portion of it measuring 3 inches by 4, say, is more useful. To fill the whole available angle requires too close an approach to many objects, especially people. The effect is unpleasant, it is difficult to focus and usually it is much more convenient and agreeable to work at a greater distance.

Efficiency, in a sense, means using your camera under the conditions to which it is best suited. The camera under discussion does its most successful work from fifteen feet to distance, in fair light, out of doors, with stop F/11 and a slow shutter-speed. It is unsurpassed in this field both on account of the reasons mentioned and on account of its portability. It will do other work, of course, but here is its best field, where it is capable of making successes with delightful regularity; and it is a wide field comprising the most generally interesting subjects. The world of outdoors is big enough to hold something delightful for each of us no matter what his tastes. And we have to go a very little way to find it. Sunlight is healthful, brilliant and cheap.

In actual practice there is another factor that spoils definition in a small degree — more than enough to cancel the difference in defining-power between anastigmat and R. R. — the film may bulge enough to mar your focus. I have reason to believe that unsharpness has often been attributed to error in focus that really was caused by the film not lying evenly in the focal plane. In the camera I have been using this fault is plainly evident when using the largest stop (F/8). This fault diminishes rapidly in the smaller sizes. At F/11 it is negligible, furnishing another reason for the general use of that stop.

✕

To me art is the expression of beauty in whatever form it may appear — in the home, in the shop, in daily life, in thought and work. It is something infinitely deeper and broader than the form through which it manifests itself. Its measure of beauty is directly proportioned to the sincerity of purpose and the fineness of the ideals that give it form. The conscious effort to understand and appreciate a work of art strengthens our own ideals, through whatever task comes to our hands, we may make our own life and the lives of others happier, more worthy and more beautiful.— *Ernest A. Batchelder.*



# A Darkroom-Experience

MICHAEL GROSS

**WHEN** you lay out the trays on the table, putting your developer into the first tray, water into the middle one and the hypo-solution into the third. Do you follow me?"

Burson nodded, and the photo-supply man continued:

"You put the plate into the developer and keep it there until the highlights come through on the reverse side. Then you take the plate out, rinse it well in the water-tray and lay it in the hypo until the yellow tinge has all disappeared. Is that plain?"

Burson, eager to get home and start dabbling among the chemicals and developing-paraphernalia he had just purchased, again nodded.

"Well, that's all there is to it, then," concluded the dealer, "except that you afterwards wash the plate for about twenty minutes and then stand it up to dry. Drop in and let me know what luck you have"—and Burson, promising that he would, grabbed up his precious package and hurried out.

Arriving home, he went directly to his room and prepared to develop the batch of plates that he had exposed the day before.

"Now, let me see," he mused, untying the package of supplies, "I guess I'd better mix my chemicals and get my trays laid out before I darken the room. It'll be too late to fuss around then."

Accordingly, he dug an eight-ounce graduate out of the package, rinsed it carefully and filled it with water. Then he poured in the contents of one of the M. Q. tubes the dealer had recommended. He was at a loss to know how to stir the solution until he bethought himself of the stirring-rod he had bought. A brief search brought it to light, and, after polishing it up well, lest a particle of dust might contaminate the developer, he stirred the powder until it was entirely dissolved. Having mixed the developer, Burson began to lay out the trays, only to find that the dressing-table, on which he intended to develop, was so placed in one corner of the room as to make it impossible to work on it in comfort. He pulled the table out to the center of the room, where he could get to all sides of it easily, and then arranged his trays as the dealer had instructed. In the first one he poured the developer; then he filled the middle one with water and prepared to mix the hypo-solution which was presently to fill the third tray.

Recollecting that the dealer had mentioned something about hypo and developer being deadly enemies, he carefully scoured the graduate and then, putting in two ounces of the hypo-crystals, he filled the glass with water, stirred until all was dissolved and poured the solution into the third tray.

It all went so smoothly that he could hardly refrain from smiling at having thought chemistry a hard thing to learn. He got out his ruby-lamp and, as there was no room for it on the table, he hung it from the gas-jet so that it cast its light over the three trays underneath. Then he pulled down the window-shade, locked the door and turned out the gaslight.

Everything was now in readiness, and Burson experienced a strange thrill of exhilaration as he stood under the shaft of red light and looked down on the brimming trays. The feeling quickly gave way, however, to one of dismay, as he discovered that, in the excitement, he had forgotten to bring into the darkroom the plateholders containing the results of the previous day's snap-shooting. He hurried out to where he kept his camera-case, took the plateholders out of it and in a moment was back in the darkroom again.

Drawing one of the slides, he released a plate and let it drop gently into the palm of his hand. Then, shading the surface from the rays of the lamp, he approached the first tray, quickly slid the plate into the solution so as to cover the entire surface—he recollected that the dealer had laid special emphasis on the fact that the plate had to be wholly covered at once—and then, gently rocking the tray, he waited in breathless expectation for something to happen.

A minute passed, as long, it seemed, as all eternity; then another and another, but no trace of an image greeted Burson's straining eyes. He began to rock the tray furiously, as if he suspected the picture was lurking in some corner, and was determined to shake it loose—but all without result. Finally, in desperation, he took the plate out and held it up to the light of the ruby-lamp. To his horror he saw that the film was peeling off at the edges. Immediately one of the dealer's many warnings flashed into his mind: "Don't get your developer too warm"—the words seemed to come back to him now—"or your plates will frill."

That was it. The developer was too warm. Well, the first picture was spoiled, but he would save the rest. What a fool he had been not to

have thought of the dealer's warning before he began. He threw the plate under the table and hastened into the kitchen, where he hurriedly cracked some ice and, returning to the darkroom, almost filled the tray with it.

"It's got to work now," he muttered grimly, after he had waited a few minutes to give the ice a chance to melt. "There can't be any more spoiled ones after this."

He took out another plate and immersed it. Again he hung over the tray in breathless excitement for a few minutes, only to be disappointed again at seeing nothing appear. "Well, there's one good thing," he exclaimed joyfully, as he held the blank plate up to the light and examined it, "I've stopped the film from peeling off!"

"There must be something the matter with my shutter," he added, after a few minutes of vain rocking, "I'll bet the darn thing failed to work"—and, to satisfy himself, he sacrificed the second plate, hurried outside and gave his camera a thorough overhauling. To his amazement,

everything was in perfect order, and he returned to the darkroom sorely puzzled but determined to try one more plate before giving up.

The solution had become ice-cold by this time, and Burson nearly froze his fingers as he slid the third plate into it. Like its predecessors, however, it showed not the slightest inclination to reveal its latent beauties, and Burson, after five minutes of vain coaxing, reached up and lit the gas, flooding the room with light.

He glanced at the table and a groan broke from him as he noticed the cause of his thrice-repeated failure. On coming back to the darkened room with the forgotten plateholders, he had approached the table from the opposite side, and the tray he had thought was the first one was in reality the last.

He had been trying to develop his plates in the tray containing the hypo-solution.



LEARN from your mistakes, but don't cry over them.—*Elbert Hubbard.*

## Parallax in Paget Plates

ARTHUR G. ELDREDGE

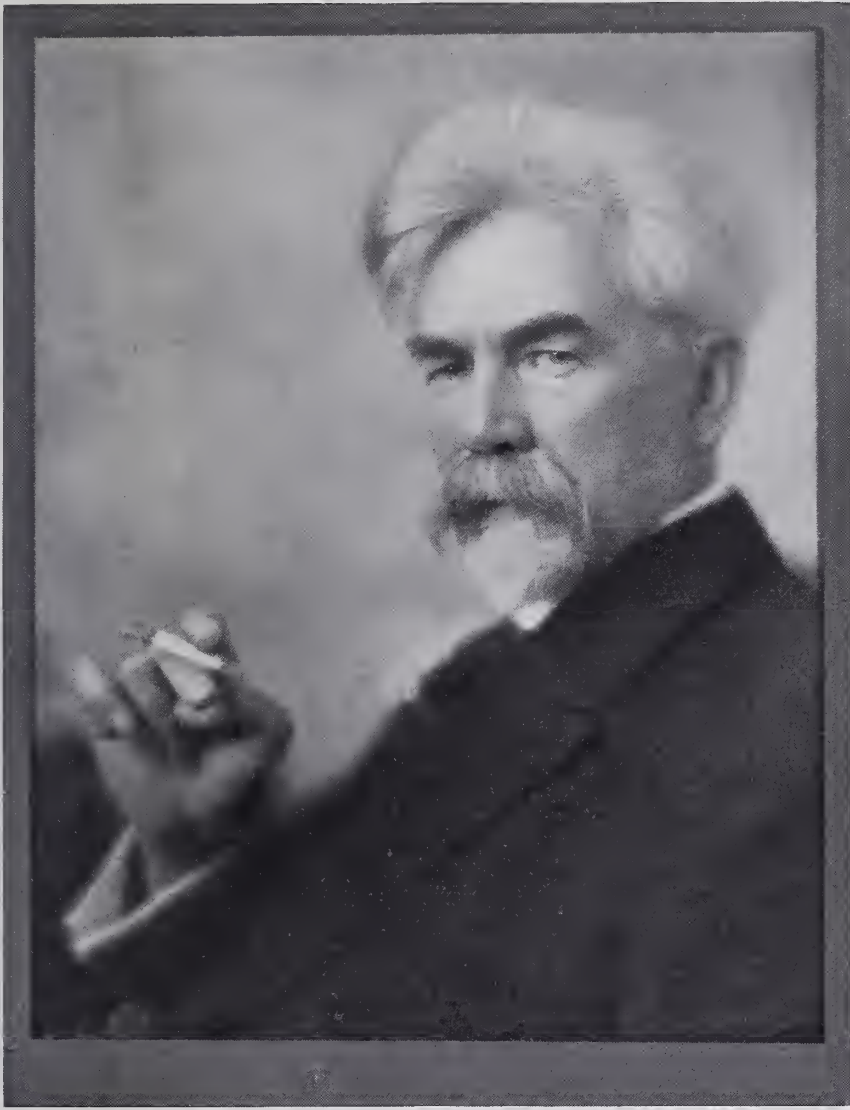


NE of the faults of the separate plate- and screen-method in color-photography is the effect of parallax. When viewing the finished plate, we quickly realize that, unless the positive is at right angles to the line of vision, we shall see colors complementary to those of the subject. It is rather annoying, but becomes less evident as the transparency is moved farther away.

The parallax is caused by an appreciable separation of the color-element from the silver image of the positive sensitized. Photographic glass is always curved, being coated on the concave side; this causes a considerable separation when two are brought together. Ordinary binding or the use of glue at intervals around the edges does not overcome the separation. This allows us to see between the color-element and the positive, when viewed at an angle. In this way we see that portion of the positive which is behind the adjoining color-element. The air-space between the screen and positive causes further trouble by refracting the light out of its direct path by reason of the great difference in refractive index of glass and air. Besides causing variation of color, it diminishes the brightness of the picture as a whole. I find that the parallax may be en-

tirely eliminated at all angles of vision by cementing color-screen to positive with Canada balsam. The refractive index of glass and balsam being nearly the same, the light is carried through both glasses nearly in a straight line, so that the black dots of the positive appear behind their respective color-elements.

Canada balsam in xylol, chloroform or benzol may be used, the chloroform solution being more desirable because of its rapid evaporation. The cementing may be done as follows: Use a very heavy solution of balsam—about the thickness of molasses in cold weather. This will harden more quickly than a thin solution. Pour a puddle of balsam about two and three-fourths inches in diameter onto the center of a lantern-slide positive, lay the color-screen down onto it—slowly, to avoid bubbles—and press together firmly until the balsam has spread to all edges. Now hold them together with a spring clothes-pin or other clip at each end. Registration will be found easily, when four clothes-pins should be put along each side. By heating in an oven for a few hours, at a temperature of 100°, the balsam is more quickly hardened. When hard enough to prevent slipping, which may be two or three days, put under quite heavy pressure for a few days and then bind.



PORTRAIT OF JULIUS ROLSHOVEN  
FRANK SCOTT CLARK







ON THE BEACH

HOWARD I. SAUNDERS

## Causes of Insufficient Sharpness

**T**HERE is no failing in photography that can have such a multiplicity of causes as insufficient sharpness. Just what should be considered lack of sharpness will not be considered here, but rather we will give, in a condensed form, a systematic exposition of the various kinds of imperfect focus and their causes, which will surely facilitate the photographer's search for them and bring to light many sources of failure before unknown to him. Out-of-focus pictures, often of a quite enigmatical nature, are apt to spoil one's enthusiasm for the beautiful light-painting art; but when the reasons are known one is armed against their recurrence.

### I. The view was sharply focused:

A. The entire picture lacks sharpness in all its parts, in the center as well as at the edges, and in every degree of depth.

(a) At every exposure. Causes:

1. Difference of focus (chromatic aberration). Remedy: an achromatic lens, or shifting the lens after focusing.
2. Difference in the plateholders. Remedy: change the apparatus (either the ground-glass or the plateholder), or shift the back part of the camera according to the focus.

3. Fogging of the lens through age or defective polishing. Remedy: change the lens or have it repolished (by a competent optician).
4. The shutter rattles when working. Remedy: get a better and steadier shutter, or repair the old one.
- (b) Not in every exposure, but occasionally. Reasons:
  1. Difference in diaphragm when focusing was not done with same stop as exposure with a badly corrected lens. Remedy: focus with same stop as used for exposure.
  2. Distortion due to excessive stopping. Remedy: do not use smaller diaphragm than F/62.
  3. Difference in plateholder, if diffusion occurs only when using a certain holder. Remedy: do not use the defective holder, or have it put in order.
  4. When making exposures with yellow ray-filter, if focusing is done before placing filter in front of or behind the lens. Remedy: focus with the filter on.
  5. The apparatus is not firmly built or is not securely fastened, so that when inserting the plateholder the part containing



A LESSON IN SAND-SCULPTURE

S. H. GOTTSCHO

- the ground-glass is pushed out of place. Remedy: have apparatus repaired, and see that parts are securely fastened.
6. The lens was fogged with moisture. Remedy: wait until fog disappears, or wipe with a soft cloth.
  7. The exposure was made before the camera had come to rest after pulling out the slide. Remedy: wait a little.
  8. The apparatus was moved by the wind or otherwise during exposure. Remedy: set up the apparatus firmly, and protect it as much as possible from motion while exposing.
  9. The apparatus was jolted by too sudden removal of cover of lens or too forcible pressure of the bulb. Remedy: use more caution in working.
  10. The apparatus was slightly moved when making a second exposure. Remedy: use more care, or omit second exposure.
  11. The plate was placed in holder wrong side to; the picture will have positions reversed. Remedy: always put plates in correctly.
  12. The exposure was made from a moving vehicle and exposed too long. Remedy: shorter exposure.
- B. Only portions of picture are out of focus.
- (a) At every exposure:
    1. The center of field is sharp while the edges are out of focus. Reason: the lens is not sufficiently aplanatic for the size of plate used or is not corrected for astigmatism or achromatism. Remedy: use a lens that covers plate properly to the edges, or stop down sufficiently.
    2. The right side of field is sharp while the left side is not; or the upper end is while the lower is not; or the center part is sharp while the left or right side or the top or bottom is not. Reasons:
      - (x) The back part of camera (ground-glass) is not parallel with the front part (lens), i.e., it is not perpendicular with the axis of the lens. In such case the lack of sharpness will be visible on the ground-glass when focusing. Remedy: have the ground-glass part made parallel, or stop down sufficiently.
      - ( $\beta$ ) The plateholder does not go in straight, so that about one-half of the plate coincides with plane of the ground-glass while the other half does not. Remedy: change the plateholder, or stop down sufficiently.
      - (y) The plate lies unevenly in the holder itself, on account of poor construction or because the spring that holds the plate has become loose. Remedy: improve the holder or tighten the spring.

3. When using a yellow filter individual parts are out of focus. Cause: the filter is poorly made, or if a film-filter is used it does not lie flat. Remedy: use a better filter. There are several excellent ones on the market.
  4. The sharpness is at a different distance from that focused upon, either nearer or farther away. Cause:
    - (x) Difference of focus. Remedy: use a chromatically corrected lens, or after focusing move the back part of camera enough to correct the difference.
    - (β) Difference in plateholder. Remedy: change camera or plateholder, or adjust camera to focus.
    - (b) Only in occasional exposures, or each time in a different spot.
  1. Same as in I. B (a) 2, because with a swing-back parallelism is lacking only occasionally between plateholder and lens-board; or only a certain plateholder is at fault. Remedy as for I. B (a) 2.
  2. Sharpness lies at a different distance from the one focused upon. Cause:
    - (x) Difference of diaphragm if focusing was not done with same stop as exposure. Remedy: focus and expose with same stop.
    - (β) Only a certain object is out of focus. Reason: the object or person has moved or been moved. Remedy: shorter exposure, or in long time-exposures close shutter as soon as movement is observed.
  3. Only the lighter parts of a contrasty picture show lack of sharpness. Cause: halation. Remedy: use non-halation plates.
  4. In different places there are light-spots (mostly circular) which sometimes may extend over the whole plate, causing a fluffy and out-of-focus appearance. Cause: reflections from diaphragm or lens. Remedy: use a lens corrected for reflections, or avoid exposures when these are likely to appear, especially against the light; use some arrangement in front of the lens to protect it against side-rays of light; or reblacken parts of lens-mounting or diaphragm that have worn bright, etc.
  5. Different parts of plate show lack of sharpness. Cause:
    - (x) Double exposure, the first of which was very short. Remedy: avoid double exposures.
    - (β) The camera or the plateholder has a small hole somewhere which produces on the plate a faint pinhole-picture causing parts of the proper exposure to be partly obliterated. Remedy: repair camera or holder, to exclude the light.
  6. A larger or smaller irregular spot lacks sharpness and is darker than remainder of picture. Cause: an object has passed quickly before the lens during exposure and left a slight trace on the plate. Remedy: suspend exposure when such objects pass.
  7. When using negative-paper or films a wave-like area of diffusion appears. Cause: the paper or film did not lie perfectly flat. Remedy: use plates, or get a holder better adapted to the purpose.
- C. With lack of sharpness double contours may also appear, because the movement causing the blurring was not a continued vibration, but a simple push out of position. The cause is the same as already given.
- II. Focusing was not sufficiently sharp. Remedy: more care in focusing, using a magnifying-glass if necessary, and use a finer ground-glass, or clean it and rub with glycerine.
  - III. A sufficiently uniform focus was made, but attention was not given to depth. Remedy: when focusing, stop down until sufficient depth is obtained.
  - IV. Sufficient sharpness cannot be obtained in focusing. Reasons:
    1. An incorrect or badly corrected lens (monocle lens, etc.). Remedy: use a better lens.
    2. A good focus can be obtained of a distant but not of a near view. Reason: lens not sufficiently corrected for near views, i.e., for greater range of view. Remedy: a better lens, and in some cases stopping down.
  - V. The distance was guessed at and focus estimated without the use of ground-glass. Reason for diffusion: wrong estimate of distance if no other reason is in question. Remedy: estimate distance carefully; if necessary, use a telemeter.
  - VI. The distance was correctly estimated, but is still wanting in sharpness. If none of the previous points applies, the focusing-scale is incorrectly placed. Remedy: have focusing-scale corrected.





SUNSET

EDITH S. CAVE

## Flattening Mounted Prints

G. EDMUNDSON

**A** PRINT on a stout paper, mounted while it is in a very wet condition, will pull even a very thick card into a semi-cylindrical form; and it is difficult, if not impossible, to get such a combination to lie flat. The nearest approach to flatness that can be obtained is got by taking a piece of stout paper similar to that on which the print was made, and of the same size, and mounting this on the back of the card while in a similarly wet condition. If the print is then kept flat under pressure until quite dry, the result will be fairly flat, although if left lying about, it will still tend to curl with its edges upwards, whichever way up it may be left.

When there are a number of mounted prints of no great size to flatten, the writer has found the following method quite practicable and effective.

A cylinder of wood or cardboard, about six or eight inches in diameter, has pasted onto it, by one edge and then rolled up, a length of paper. Wallpaper will do. The paper is then unrolled, and the mounted prints are taken one by one,

made quite warm on both sides in front of the fire, and placed on the cylinder, picture outwards, and the paper rolled around it.

The easiest way in which this operation can be carried out, when we have a number of prints to deal with, is to extend the paper on the table, put the first print face downwards on it close to the cylinder, roll it forward so as to pick up and hold the print, and then put down the next print, and so on. A piece of tape is tied around the cylinder, which is then put in any convenient place for a day or two.

The prints come out of this slightly convex, but soon flatten. This method must be attempted only after the mountant has become quite dry.

*Photography and Focus.*

THERE is a sort of Rubicon which art should not cross. The danger is to imitate mechanically masters who are given as models and who are themselves heavy, false and conventional. Cease to observe nature and your sentiment of color will diminish in intensity.—*Henry Havard.*



TYPICAL COUNTRY-SCENES IN SWEDEN  
G. HORLIN







SWEDISH WATERSCAPES

G. HORLIN

## Tourist-Photography in Sweden

G. HORLIN

**T**HERE is, probably, no country in the world equal to Sweden for tourist-photography in the summer-time. And why? Because it is never too warm to be outdoors at any time of the day. Days are long in the height of summer: the sun rises at 2.30 A.M. and sets at 9.30 P.M. For that matter, successful exposure can be made at any time during a summer-night; but not a snapshot. Yes, even a snapshot can be taken night or day in the northern part, which is familiar to all as "The land of the midnight-sun." So the advantage for a business-man, or anybody employed during the day, can readily be seen, as it leaves four hours at each end of the day for the enjoyment of amateur photography.

Roads, nearly all over the country, are dry and hard, and good to walk upon. There are plenty of creeks and other small waters, foliage fresh and green and the country-people in general are very accommodating. When meeting a farmer working in the field or driving his team, tell him his picture would be desired in the view and he will immediately spit out his tobacco or the wad of snuff he keeps in one corner of his mouth, wipe his face and stand smiling as long as wanted. So there will be no need to worry, for one may walk fearlessly wherever one pleases, and if found on somebody's property the owner will never meet one with a gun or a big dog, as has several times happened to me in former years around Chicago,

although I am both an easy-going and good-natured man.

I shall not try here to write a serious article telling how to succeed in pictorial pictures, as I cannot, with my accompanying illustrations, prove that I am a pictorialist. But I know there are thousands like myself who would rather strive to make what is called a "straight" photograph than to follow some workers who simply throw the view badly out of focus, over- or under-expose, draw a horsefly or fishhook in one corner for initials, and title it "Morning Twilight" or "As Day Fades Away," and think that the rest of the family will stop, gasp and wonder how he did it?

This must not for a moment be looked upon as a faint desire to dispute that there are eminent American photo-pictorialists who do work and make pictures well worth going a long way to see, and worth going to see again and again. So I shall right here leave the pictorial question to such writers as Paul Lewis Anderson, and relate a couple of little incidents which happened to me on my photographic tramps last summer.

I started out with a few dozen plates and other little knickknacks that would come in handy on a few days' trip, put them all in a tourist bag and strapped it onto my back. Writers and even plate-makers themselves always recommend that the best way to keep exposed plates on such trips when exchanging is to put the plates back



into their original boxes film to film and glass to glass. This I have found on several occasions is not the best way, because, when traveling around several days, riding and walking, little particles of the glass will become loosened and find their way between the two films, travel around on the plates from one end to the other and back again many times, leaving hundreds of little holes on the films where you least want any. And you cannot work as safely and quickly this way as may be needed in a place not quite free of white light. Or if you have bribed the farmer's wife to use one of her clothes closets she will be coming now and then to look in and see if any of her belongings have gone into your pocket. My way is to cut a lot of dead black papers the same size as the plate, put them into an envelope and take it along. When exchanging the plates place each one film side down with a black paper on top of it. This way is much safer, much easier; more plates can be put into one box with no danger of mixing plates exposed and not exposed.

But this you must not forget, as I have found out to my sorrow. Do not cut the papers smaller than the plate you are using or there will be trouble. On several occasions I had to economize on the paper and cut the pieces smaller, not knowing it would make any difference; but I found upon development that the negatives were badly marked where the paper did not cover the plate entirely. These defects will appear stronger if plates are left undeveloped for some time. By no means use white paper or printed paper between the plates, as such paper would ruin your plates before halfway home.

For over twenty years I have been an ardent camerist and a good consumer for the plate-makers, but not until last summer did I get an eye-opener on another trifling matter, but which has cost me both worry and plates. When taking sunsets, or cloud-formations including the sun behind a cloud, it often happens, when a filter is on the lens and everything ar-

ranged for the exposure, one pulls the slide, takes hold of the bulb, but very often hesitates just a second or two to let a certain cloud pass just a little more before pressing the bulb. So I did, but on developing found the negative "muddy" and having the appearance of overexposure. I tried again with the same results. But one day it happened the slide was only partly drawn a second, and there I found the trouble — a leakage somewhere — but on examining the shutter and bellows I could find no fault, so I spoke to an expert on shutters, and that gentleman told me that the material shutters are made of will, in years, fade and not be opaque as they look, but leaky. So I went to work and again examined my shutter against a good light, and found to my surprise that I could see light through those dark blades, something resembling a weak ruby light. Look over your old shutters (mine is nearly twenty years old) and perhaps you will find out why so many of your plates got fogged last summer.



SYNTHETIC work generally is considered to require a higher type of mind or a more vivid imagination than analytic; but the writer does not feel this to be the case. One type of mind cannot be considered higher than the other, any more than the scientist can be considered superior to the artist, or *vice versa*; they are simply different.—PAUL LEWIS ANDERSON.



A MOUNTAIN-STREAM

G. HORLIN



THE LAND OF THE MIDNIGHT-SUN  
FISHING-BOATS  
G. HORLIN





# Converting Metric Formulæ Rapidly

A. LOCKETT



NE sees so many metric formulæ nowadays in photographic or scientific journals, and frequently in newspapers, that a really easy and quick method of converting them into British equivalents cannot but prove useful. The rules commonly given for the purpose are not as simple as they might be, and many fight shy of the task or manage to get incorrect results. It is a further defect of existing systems that the converted formula has no visible identity with the original, so that if an error inadvertently creeps in it will not be self-evident.

Take, for example, the metric formula for a bromide developer given at A below. Converting this to grains and minims in a pint of solution by a popular method, that is to say, multiplying the grams by 8.8 and the ccs. by 9.6, the result is as at B. The time taken by a fairly quick arithmetician averages two minutes, while, as will be seen, the new figures bear no resemblance to the original ones:

	A	B
Metol . . . . .	1 gram	8 grains
Hydroquinone . . . . .	3.5 grams	30 grains
Sodium sulphite . . . . .	37.5 grams	330 grains
Sodium carbonate . . . . .	37.5 grams	330 grains
Potassium bromide (10-percent solution) . . . . .	2.5 ccs.	24 minims
Water . . . . .	1,000 ccs.	20 ounces

The last consideration is more important than might be thought, and arises, of course, from the usual desire to convert the metric formula into a solution containing an even pint, or a given number of entire fluid ounces. It is surely much easier to have an odd proportion of water or other solvent if thereby one is enabled to keep all the figures practically in their original state, or to obtain such a face correspondence between the old figures and the new that the accuracy of the conversion is obvious at sight, thus dispensing with any need for verification or checking.

With this object in view the writer has devised an extremely simple method, which is undeniably more rapid than any hitherto proposed — in fact, almost instantaneous. To all intents and purposes it keeps the exact proportion of the various ingredients and bears an immediately apparent relation to its metric original, so that checking is unnecessary, while reconversion, should it ever be desired, is equally quick and easy.

The rule is as follows: — To convert a formula expressed in grams or ccs. per litre into grains

and minims, multiply the grams by ten, or the ccs. by eleven, and dissolve in 23 ounces of water or other solvent.

Converted in this manner, the foregoing formula would read:

Metol . . . . .	10 grains
Hydroquinone . . . . .	35 grains
Sodium sulphite . . . . .	375 grains
Sodium carbonate . . . . .	375 grains
Potassium bromide (10-percent solution) . . . . .	27.5 minims
Water . . . . .	23 ounces

(The half minim of bromide may, of course, be ignored.)

Here, it will be noted, the figures have a definite similarity to those of the original metric formula, so that one is instantly sure that no mistake has been made. The time taken for conversion averages only five seconds. The 23 ounces, it may be remarked, are sufficiently near a pint to form a convenient quantity for making up.

The approximation to complete accuracy is very close indeed, the error being less than 1 percent. For absolute correctness to three places of decimals it would be necessary to multiply the grams by 10.074 and the ccs. by 11.04; so that by using 10 and 11 as the multipliers there is merely a deficiency of 0.735 percent in the grains and 0.363 percent in the minims, which is quite insignificant in practice.

The following simple memory-rhyme may assist many to remember the new rule:

To convert, with the least of pains,  
 Ccs. to minims, grams to grains,  
 Multiply grams per litre by ten,  
 Or ccs. by eleven; then  
 The solvent's right amount will be  
 Fluid ounces twenty and three.

To reconvert, one need only write 1,000 ccs. instead of 23 ounces, and divide the grains by ten or the minims by eleven, calling them grams and ccs. respectively.

For the benefit of those not familiar with the metric system it may be helpful to state that a litre = 35.195 fluid ounces, or 35 ounces 94 minims, and contains 1,000 cubic centimetres. A cubic centimetre, or cc. = 16.894 minims, while a gram = 15.432 grains.

To convert a metric formula of 500 ccs. bulk, multiply the grams by ten and the ccs. by eleven, as before, but take only 11.5 ounces of water or other solvent. For a formula of 100 ccs. bulk, take 2.3 ounces of solvent (0.3 ounces is, of course, 144 minims).





IN CORDUROY

PELTON & HIGGASON

When but a small quantity of a 1,000 cc. formula is wanted at a time the original metric figures may be retained, calling ccs. minims, and grams grains, and taking 2.3 ounces of solvent. Ten percent (one-tenth) should then be added to the minims. The first-mentioned formula converted in this way would read:

Metol . . . . .	1 grain
Hydroquinone . . . . .	3.5 grains
Sodium sulphite . . . . .	37.5 grains
Sodium carbonate . . . . .	37.5 grains
Potassium bromide (10-percent solution) . . . . .	27.5 minims
Water . . . . .	2.3 ounces

The fractions are given to show the working, but are ignored in practice.

*The British Journal of Photography.*

### Using Dry-Mounting Tissue

THE amateur using dry-mounting tissue for the first time is apt to find that no matter how much heat he uses the tissue will stick to the print, but will persistently refuse to adhere to the mount, especially if it is a glossy print on fairly thick paper. Indeed, this matter of maintaining exactly the right temperature has discouraged many who really desire to use this process. The trouble is that the heat causes the print to curl inwards to such an extent that the heated mountant on the tissue is not strong enough to hold the print down. The remedy is to place a flat, heavy weight on the print and mount, until the heat has left them, when they will be found to adhere perfectly.—*Alfred I. Tooke.*

# Untrue Tone-Values in Lights and Shadows

WILLIAM S. DAVIS



NE of the most common faults met with in photography is the falsification of contrasts and failure to show gradation of tone properly in the lightest or darkest portions of a scene. Sometimes both ends of the scale are wrongly represented in a single print, or again only one end; but in any case the desired artistic quality of the result as a whole is seriously marred if not entirely spoiled because the "values" are not truthfully indicated.

Various reasons might be given as the cause, such as the subject possessing a greater range of tone-gradation than a photographic plate can record, employment of unsuitable materials, lack of ray-filters, etc., all of which will be considered later; but the primary reason is lack of careful study by the photographer of the varied gradations in the scene itself, and consequent failure to adopt proper means in taking the picture. It cannot be too strongly urged, particularly upon beginners, the importance of taking time to understand the essential combination of elements which make a given view attractive, for a large part of the technical difficulties will quite disappear if one only learns to analyze such features before making the exposure, and thus decide upon the kind of effect wanted in the finished picture. Once this is accomplished the rest becomes a matter of employing a systematic technical treatment, readily varied to fit the particular work in hand.

While experienced pictorialists understand the matter, it may be proper for the benefit of others not acquainted with art- or studio-terms to say that the word "values" is used by artists

to cover the relation, one with another, of the innumerable transitions of tone which exist in every subject — what people in general would call just light and shade. The term, however, covers much more than the latter, since it includes those differences due to variations in depth of color, the relation of a lighter to a darker object or detail and vice versa; likewise such alterations as are caused by the effect of atmosphere between the subject and observer; therefore in referring to the tone-values of a picture one means the relationship between all the spots or areas of different tonality which go to make up the entire composi-



FIG. 1. FALSE HIGHLIGHTS



tion, entirely regardless of how they are produced in nature.

What is considered truth in the "values" in a picture is based upon the theory that since pure white and black represent the greatest possible extremes of contrast upon paper or canvas, these must stand for the same extremes in nature. Now as *absolute* black or white is not often found in subjects usually chosen for picture-making outdoors, the gradations, or "values," of the picture should in consequence be kept within approximately the same relationship to the extremes of our limited scale as the tones of the original occupy in nature's scale. Owing to the restricted length of scale available it is not always possible to adhere absolutely to this principle, for in pitching the general tonality of a picture in a high or low key better to express the

particular feeling desired, an attempt to condense all gradations fully would sometimes result in the merging of certain "values" essential to keep better separated for the purpose of retaining some essential impression. In such an instance the feeling of truth must take the place of a literal translation, and the most important parts be retained at the expense of partial suppression of gradation at one end of the scale. Thus, in a scene showing a long range of contrast, with many gradations between, one may consider that the sparkling quality of the lighter tones constitutes the *raison d'être* of the picture, and so elect to retain these at the loss of minor gradations in the deep shadows, which have to be flattened somewhat to keep them within the scope of our available scale. Another time the various shadows are of prime importance, so to allow good

differentiation between them the highlights must approach each other more closely than would be comparatively correct. This extra compression of "values" at one end or the other may appear perfectly true in the finished work, while the merging of several tones into a mass of blank white or black would not merely represent a much greater loss of gradation, but at once convey a feeling of exaggeration.

In taking, for example, a sunshine- and cloud-effect over water the actual difference between the sunlit and darker parts is such that some jump to the conclusion that it is necessary to make use of extreme measures to indicate this contrast, usually producing a result similar to Fig. 1. Now as a matter of fact this does not suggest the sparkle of strong light on the wavelets, because the separate minute spots of light reflected by the undulating water have merged into an unbroken *flat mass* throughout the lights instead of preserving the little shadows caused by the sides of the waves toward the observer. It is quite true that



FIG. 2. A SUNBURST



under certain conditions the diffraction of intense sunlight on water will cause some of these details to run into a patch of highest light, but this covers only a relatively small portion of the water where the illumination is strongest, while in the rest of the sun-path the tone-gradations become more and more defined until they finally approach the middle-tones. Another feature in our example is rendering of the clouds in too low a tone, for while a reasonable amount of difference is necessary to emphasize the lights, this should not go so far that the feeling of atmosphere and general luminosity is destroyed. Fig. 2, which conforms to the principles laid down, is presented for comparison. In this the scale of contrast is much shorter, but the shimmer of sunshine is suggested by means of the gradations retained throughout the lighter passages.

Fig. 3 shows a defect common in the average beginner's landscape-work — viz., lack of proper "values" in the deeper parts, which run into solid masses of black. This is not in accordance with what the eyes see, because an absolutely black tone implies utter absence of illumination rarely met with in daylight, since the shadow-portions of practically all subjects outdoors receive a certain amount of reflected light from their surroundings, to say nothing of the general diffused light from the sky, some of which finds its way through even the thickest foliage. Moreover, when there is an appreciable amount of space between the observer and a mass in shadow (even though a black object) the intervening air, owing to its refractive quality, will diffuse some light, the effect of which becomes greater with increasing distance and the amount of moisture held in suspension by the atmosphere. Destroy this quality in a picture by representing some spot in the middle-distance,

or beyond, by a patch of absolute black and the feeling of aerial perspective, or separation of planes, immediately vanishes. If the reader will now compare Fig. 4 with Fig. 3 the difference in quality becomes apparent, due simply to the reasons stated.

Now for the technical cause and remedy in photographic work.

Loss of "values" at either end of the scale is generally due to unsuitable exposure, over-development of the negative or both, and the different effects may be classified as follows:

1. If the lights appear in the negative as unprintable masses of blackened silver, while the



FIG. 3. FALSE SHADOWS

deep shadows are nearly or quite clear glass, underexposure *and* forced development are indicated.

2. Full gradations throughout the middle-tones and into the stronger shadows, combined with blocked-up lights, show correct exposure but too long a time in the developer (or solution over-strong), which has gone on reducing the exposed silver until one after another several lighter tones have merged into one opaque mass. Sometimes, when the case is not extreme, the various "values" in the higher lights are visible in the negative, but possess too much opacity for the printing-process to record by the time other parts of the subject are correctly printed.

3. Flat highlights which lack proper differentiation of values, but possess good general printing strength, together with very full detail in all other portions, show considerable overexposure followed by ordinary development.

4. Highlights correct, but shadows lacking tonal quality. Exposure timed for lighter parts alone. Development, however, stopped at the right point, since forcing would not bring out gradation where the exposure has not penetrated.

The general remedy in each of the classes cited is obvious, but owing to the extra control possible by using certain kinds of plates and filters, the matter of materials deserves mention.



FIG. 4. SPRINGTIME WOODS

Some subjects are rendered more difficult to photograph satisfactorily owing to the lighter passages reflecting a disproportionate amount of blue and ultra-violet rays as compared with the deeper parts — a snow-scene with dark trees, for example — so, as all plates or films are more sensitive to these rays than any other, the actual photographic contrast is even more than that seen by the eyes. While color-sensitive emulsions share this defect with ordinary ones they have the decided advantage of being far more sensitive to the less actinic colors than the latter, consequently are better able to do the work desired; but to secure full benefit from their use it is necessary to hold back the blue-violet. The

several types of “self-screen” plates are designed to do this, and are excellent when conditions are not too trying, but greater control is possible when using separate ray-filters on the lens, which vary in compensating-power according to their depth. A 3X is very serviceable for ordinary use, but a stronger one (say about 8X) is better when color and tonal contrasts are great. It is generally accepted as a fact that thickly coated emulsions rich in silver will render a longer scale of tones, therefore it becomes advantageous to use some variety of so-called “non-halation” plates composed either of a single, thick emulsion or a double coating of a fast over a slow emulsion.

Using a suitable plate and filter, the best general practice is to expose for the shadows and stop development of the negative when the highlights have reached correct printing-strength. Under all average circumstances this gives one the greatest possible number of “values” in their true places throughout the entire scale. Once in a while an abnormal class of subject may be found, consisting of highlights and middle-tones over practically its entire area with the exception of some small spots of very

deep shadow, in which case it may be necessary to modify the proceeding in some degree by timing the exposure for the most important parts. This, of course, will mean losing gradation in the deep shadows, but if these prove a jarring note in a print made on some soft-working paper, like bromide, recourse can be had to staining, or otherwise treating, such portions of the negative enough to prevent their printing quite black. On the same principle one may have to disregard small patches of highlight occurring in strong shadows, such as thick foliage, exposing for the important parts and developing accordingly; then lower the intensity of the offending lights by after-treatment.





BACIO DI LUNA  
WILLIAMINA PARRISH







## EDITORIAL



### Catering to the Public

THIS question has agitated the minds of the purveyors — the merchants with commercial instincts — but not the artist, who creates subject to his muse. A happy medium, a judicious blending of the two, would seem earnestly to be wished so far as it applies to the professional photographer. And yet the merchant, eager to serve the public, should have a high standard as to the quality of his wares, even though an inferior grade will yield him a relatively larger profit. The high-minded merchant will experience no satisfaction in amassing large profits at the expense of his self-respect, even were he clever enough to sell goods of second choice as of prime quality, which is done every day. The merchant who by knowledge and experience discriminates in favor of the best that can be produced, and enjoys a large patronage, has cause to be satisfied with himself, and deserves the esteem of his fellow-men. He explains to his patrons the difference between superior and spurious products, and wins the confidence and respect of his patrons. He caters to them only so far as he carries the kind of goods they need.

We find this supremacy in excellence exemplified in various lines of business; but less so, it seems, in portrait-photography. The matter lies entirely with the individual photographer. If he have genuine artistic ability and a commanding personality, he should be in a position to set the standard of artistic excellence for his customers. Led intelligently and tactfully, they will acquiesce readily, and look upon the master-photographer as the superior being that he is.

When Ira L. Hill, the popular New York photographer, declared at the New York state convention, last February, that the public should be the judge of the quality, that it would pay any price for what it wants and that the photographer should find that out and supply it, he meant, of course, that this should be done with certain reservations. He intimated a compromise, not a complete surrender of the photographer's artistic ideals. Like Dudley Hoyt, for instance, Mr. Hill's patronage is among society-women, most of them young and attractive, and he would consider it unwise to force upon them his personal notions of art, if by so doing he sacrificed or impaired the likeness. Of course, a certain

degree of flattery in the portrayal is expected of him. Few elderly or ill-favored sitters would accept a literal record of their face and figure, as was Franz Liszt with his numerous warts.

The shrewd photographer whose admiration for Rembrandt and Velasquez would take a practical form will learn by experience to what extent he may apply their methods of lighting and characterization to his sitters, of whom only a few may accept an interpretation in which his vigorous personality dominates the likeness. When making pictures for the Salon is the time to give full sway to his artistic inclinations.

But it is in the radical changing of the features and the contours of the anatomical structure where the photographer is a law unto himself. Here the question of pleasing his customer is supreme, and where artistic considerations — except those that accrue to his pecuniary advantage — should yield. The average sitter desires a flattering likeness, though not an obvious perversion of physical facts. Unfortunately, and in the attempt to modify protuberances or depressions that have been accentuated by the lighting, the average retoucher does his work badly, imparting an unnatural appearance to the anatomy and obliterating character and expression.

Physical improvements such as reducing a generous waist, straightening a rounded back, transforming a double-chin or shaping the upper arms, are in the nature of surgical operations, and should not be considered perversions of truth. When performed with the skill of a — but one should not betray confidences — so that not the slightest trace of the retoucher's work is visible, there is cause only for congratulation; the patron is delighted with the transformation, the photographer is satisfied with his efforts and the resulting fee, and the public admires the artist's general skill, though it is not in the secret.

But what troubles the soul of the critical public is the sinful way in which the neck-region is frequently retouched. It would provoke no criticism where it is done skilfully, even though this concerns only the photographer and the sitter. In many cases the modeling at the base of the throat, including the pretty dimple (the suprasternal notch), is obliterated and replaced by a meaningless and badly retouched waste, whereas an artistic suggestion of the familiar anatomical structure is consistent and pleasing.



# ADVANCED COMPETITION



Closing the last day of every month  
Address all prints to PHOTO-ERA, Monthly Competition  
383 Boylston Street, Boston, U. S. A.

## Prizes

*First Prize.* Value \$10.00.

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*Honorable Mention:* Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.

## Rules

1. This competition is free and open to any camerist desiring to enter.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. **Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.** Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P. or black-and-white paper having the same gradations and detail.

3. *Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name, address, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what competition it is intended.*

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with *double thicknesses of stiff corrugated board, not the flexible kind, or with thin wood-veneer.* Large packages may be sent by express very cheaply and with indemnity against loss.

7. The prints winning prizes or Honorable Mention in the twelve successive competitions of every year constitute a circulating collection which will be sent for public exhibition to camera-clubs, art-clubs and educational institutions throughout the country. The only charge is prepayment of expressage to the next destination on the route-list. This collection is every year of rare beauty and exceptional educational value.

## Quarterly Miscellaneous Competitions

IN order to extend the opportunities for participation by a larger number of our readers, and to broaden the scope of the entries, these will be a feature of 1917.

## Awards — Subject for Photo-Era Cover

Closed April 30, 1916

*First Prize:* T. W. Kilmer, M.D.

*Second Prize:* E. G. Dunning.

*Third Prize:* Fannie T. Cassidy.

*Honorable Mention:* Lawrence Baker, Virgil R. Boozer, H. L. Bradley, Rupert Bridge, C. M. Campbell, Edward C. Day, Karl Fichtner, J. H. Field, Alice F. Foster, M. Frey, A. B. Hargett, Chas. A. Hughes, Franklin I. Jordan, Carl H. Kattelman, E. J. Koester, B. F. Langland, G. A. Laurence, D. J. McCarthy, Richard D. McCue, Alexander Murray, Harry G. Phister, E. M. Pratt, Clarence Teamer, Frederick Van Riper, A. M. Vinje, Belle M. Whitson, Mrs. H. J. Wiegner, Alice Willis, William J. Wilson, Elizabeth B. Wotkyns, B. L. Wright, William H. Zerbe.

Special commendation is due the following workers for meritorious prints: V. W. Baker, R. Bardewyck, Jacob Bosshart, J. M. Connor, Antoinette A. Cornish, Chas. M. DeBevoise, Thomas Elsum, S. P. Emerick, Antoinette B. Hersey, Marguerite Munger, H. Pieter, G. Pike, Mark A. Richardson, Harry Schaeffer, D. Vincent Smith, Alvin Stallman.

## Subjects for Competition

- "Speed-Pictures." Closes June 30.
- "Nature-Study Subjects." Closes July 31.
- "Figures in Landscape." Closes August 31.
- "Animals in Landscape." Closes September 30.
- "Marines." Closes October 31.
- "Camp-Scenes." Closes November 30.
- "Flashlights." Closes December 31.
- "The Spirit of Christmas." Closes January 31.
- "Miscellaneous." Closes February 28.
- "The Spirit of Winter." Closes March 31.
- "Home-Portraits." Closes April 30.
- "Miscellaneous." Closes May 31.



Photo-Era Prize-Cup

IN deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup of artistic and original design, suitably inscribed, as shown in the accompanying illustration.





WHEN WE WERE LITTLE BOYS

DR. D. J. RUZICKA

### Figures in Landscape

#### Photo-Era Competition, Closes August 31, 1916

You will notice that the wording of the contest-subject this month varies somewhat from that given in previous years. It has heretofore been "Landscape with Figures;" this time it is "Figures in Landscape." The change of wording places the emphasis on the figures, and requires that they be made the first interest, while the landscape is merely of secondary importance, the background. The majority of the paintings of "Papa" Corot are good examples of "Landscape with Figures." The landscape is always the dominant thing, there is never any question about that; but almost invariably he introduces the human element in some form: it may be only a single tiny figure, or it may be a number of figures, as in "The Dance of the Nymphs;" but even here they are quite engulfed in the charming woodland and entirely subordinate to it. The secret of success in either line of work is to have one thing entirely dominate the other — there must be no manner of question which is the main subject of the picture; no division of interest, for that is fatal to artistic merit.

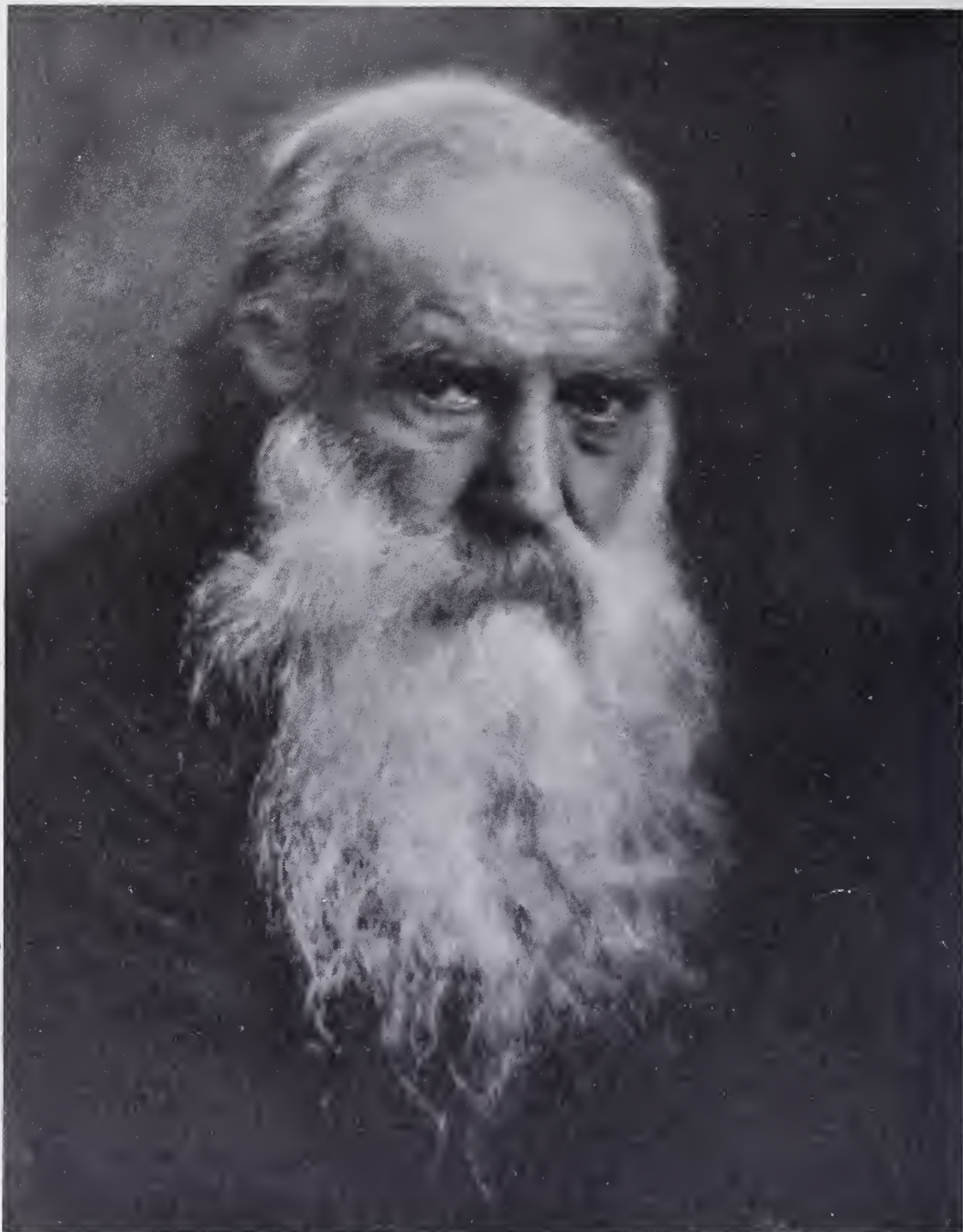
Among artists of the brush a good exponent of our present theme, "Figures in Landscape," is Millet. In such subjects as "The Angelus," "The Gleaners" and others like them we have ideal models toward which to work. Here there is no question of the dominance of the figures; they make the picture — the landscape is

there, but merely as the necessary setting and logical environment of the human interest. In "The Gleaners" there is not a little interest in the background — the big ricks, the loaded wain, the reapers and the little village, but all is enveloped in a sort of luminous golden haze, through which all appear in softened color and vague outline. Against this the bright head-coverings of the three stooping women come out with great emphasis, and the eye is held completely by the figures, all the rest serving merely as the necessary explanation of their action.

Other artists that excel in portraying the peasant-type seem to have this happy faculty of allowing their setting to play the part of the chorus in a Greek play in explaining the action of the chief performers. Take the same subject by a different artist, Breton's "The Gleaner." Here the sturdy figure and its burden fill almost the entire canvas, yet at the right one has a glimpse of a row of sheaves and the field of stubble. In "The Song of the Lark," by the same artist, there is the wide cultivated field and the roofs of a group of buildings; but one sees only the erect listening figure, sickle in hand. In the most artificial school of French art, as typified by Watteau, the background becomes so unreal as to make it simply a stage backdrop, unworthy the name of landscape; yet the relative proportions of the figures and the setting are instructive.

The variety of subjects that one may utilize is limitless; but one must always regard the appropriateness





HEAD-STUDY  
FIRST PRIZE — SUBJECT FOR PHOTO-ERA COVER  
T. W. KILMER, M.D.



of the setting for the costume and general type of the figures. A hay-field is no proper background for a "cityfied" figure, whether man, woman or child, any more than Fifth Avenue would be for a farmer straight from his haying.

The farm, with its varied employments, is a fruitful ground for study. The plowman, either at his work or as he "homeward plods his weary way," is one of the best of subjects; the hay-makers, at work or eating their noon meal in the shade of some fine old tree; the apple-harvesters or potato-diggers. All outdoor laborers in their own natural garb and with a glimpse of their habitual surroundings are splendid picture-material. Such types are not always easy to perpetuate, however. The idea that his picture is being taken will not infrequently take all the natural ease and grace out of his movements, and he has an unconquerable desire to "face the music," which is deadly to pictorial effect.

When the figures are to be small it is often possible to take them unawares; but in closer work this is hardly possible, and one must make every effort to obtain a natural and unconscious pose. One gets in the older countries, and possibly in some parts of our own, the groups of women washing by the side of a stream or tending flocks of sheep or goats. It nearly always takes more or less of an argument to induce humans of the "feminine persuasion" to submit to being photographed just as they are. The picturesque dishevelment that makes them good subjects for our purpose will all disappear if they are given a chance to "slick up."

If a personal experience may be pardoned, I once found a delightfully pretty and picturesque child picking up autumn-leaves at the edge of a wood near her home. With her plump, bare feet and crumpled pinafore of a nondescript color she was an ideal subject; but while I was placing my camera and making preparations for the exposure she slipped away — to return in a stiffly starched white dress, all her picture-possibilities ruined. A little investigation, however, disclosed the fact that the soiled pinafore still remained under the newly acquired finery, and the picture was secured, not, however, without protest.

But the sons and daughters of toil are not the only interesting models. It would be hard to imagine a more inspiring subject for an artist, whatever his means of expression, than sweet-faced girlhood among the blossoming trees of springtime. The trout-brook is a more appropriate setting for the boys in early summer, and the curving bank of a stream is usually a great aid in composition. It is not always easy to find the landscape which shall be the suitable background we seek. It must be exceedingly simple; must include nothing that will obtrude itself on the eye and draw it from the figures. If there is any pronounced convergence of lines in the background the figures should be placed at their focus. When so used they seem to lead the eye toward the point of interest, and are an aid in concentrating attention at the desired point.

The figure or figures should occupy a large part of the foreground of the picture, and should be well placed in regard to the margins of the picture-space. They should not be equidistant from the margins, but decidedly nearer one side, and as a rule should face toward the side on which there is more space. A pose facing the camera is seldom the best one, and the head should generally be turned at a slightly different angle from the shoulders, to give animation and avoid stiffness. If the person is employed in some natural occupation, the best results may be expected; but if this is not possible the attention should be directed elsewhere than toward the operator. Possibly some object outside the picture may furnish the interest, as in "The Song of the

Lark," when the lark is not seen yet the tense listening attitude of the girl almost makes its song audible to one. In "The Angelus" also this is true, whereas in "The First Step," also by Millet, the father and mother are entirely absorbed in the child; and when several figures are introduced they should be interested in some one thing, otherwise unity is lost.

The subject is not an easy one to handle successfully, but when a well-selected and well-posed figure has been furnished with an appropriate and simple landscape-setting, something has been accomplished of which the maker can be proud, and feel that his labors are well repaid.

### Working-Up the Negative on Onion-Skin Paper

DURING the last few months several articles on improving negatives have mentioned the method of the late A. Horsly Hinton of covering the glass side of the negative with a thin, translucent paper and doing the rough retouching on this. I have had occasion to give this method a thorough trial, and find it excellent for raising in value deep shadows, emphasizing a patch here and there, for working in skies, etc. During my trial of his method I hit upon a few dodges which may be of some use to others using this method.

There is on the market a writing-tablet of onion-skin paper, about  $7\frac{3}{4} \times 10\frac{1}{2}$  inches, which is beautifully adapted to this work for negatives  $6\frac{1}{2} \times 8\frac{1}{2}$  or smaller. For  $8 \times 10$  negatives there is a thin, tough and translucent typewriter-paper, much used in making carbon-copies, which is also very good for the purpose. Both these papers are readily obtainable at any stationer's, and are inexpensive. They stand the necessary wetting without becoming flabby or tearing easily, dry out smoothly and take the pencil well.

In spreading the glue around the thin edge of the glass, in spite of the greatest care you will occasionally get spots of glue on your negatives — your best ones, generally. This will "raise" the gelatine, and is a nuisance to remove by rubbing with wet cotton or rag. I find that these spots show up in the prints as often as not, if not removed. If, however, instead of glue, a fairly thick solution of white shellac in alcohol is used (1 part shellac in  $1\frac{1}{2}$  parts wood- or grain-alcohol), this annoyance disappears, and you will get at least *as good* adherence of the paper to the glass — personally, I think it sticks better. Then, when that inevitable spot does get on the negative, a very gentle dabbing with absorbent cotton, wet with alcohol, removes it instantly and dries in a very few moments, after which the spot is gone for good. So, at least, has been my experience.

In using the shellac one hint is important — the paper should be just damp — *not wet*. I soak the paper in water, blot thoroughly, air-dry a few moments, then stick in place, and after noting that it is adhering all around, set aside for about half an hour before trimming away the surplus paper and applying the pencil.

After applying the damp paper, and before it has had a chance to dry, the paper will *not* be entirely smooth, but will show a few wrinkles. These should disappear as the paper dries. Any attempt to stretch the paper in order to remove these will tear it where it folds over the sharp edge of the glass.

If it should be necessary to remove the paper, a rag dampened with alcohol and rubbed over the edges will take off the paper and shellac cleanly and leave the edges ready for the next trial. Wood-alcohol is the best for this work, both in making the shellac solution and for cleaning. It does not whiten the gelatine as grain-alcohol occasionally does.

L. C. BYCK.





# THE CRUCIBLE

A MONTHLY DIGEST OF PHOTOGRAPHIC FACTS  
*With Reviews of Foreign Magazines, Progress and Investigation*  
 Edited by PHIL M. RILEY



### Anso Pyro for Development-Papers

THE Anso Company now offers the following formula, which it is claimed gives beautiful results on development-papers:

A	
Pyro .....	180. grains
Sodium sulphite, anhydrous .....	3 ounces
Potassium ferrocyanide .....	30 grains
(Yellow prussiate)	
Water .....	16 ounces
B	
Sodium hydrate .....	60 grains
Water .....	16 ounces

For use, take 1 ounce of each stock-solution and 2 ounces of water. Add 1 drop of a saturated solution of potassium bromide to each 4 ounces of the diluted developer.

Prints develop in 1 to 1½ minutes. The solution can be used repeatedly without stain. Soft results can be had by diluting the developer. It can be used for sepias as well as blacks.

### Removing Hypo Without Washing

THE best hypo-eliminator is potassium permanganate. Put enough into any quantity of water to turn it pink; the presence of hypo will clear the solution. Continue to treat the negative with permanganate solution until, after continued immersion, the color is not removed.

### An Old Daguerreotype Exposure-Table

THOSE who have found the PHOTO-ERA Exposure-Guide of sufficient value to become familiar with its characteristic appearance through frequent reference will find it interesting to compare it with the table below, reprinted from *The American Family Magazine* for May, 1840, published in Boston. It forms part of a very interesting article on the daguerreotype, incorporating translations from the original paper by the inventor, L. J. M. Daguerre. Most significant is the fact that the exposure-times given are entirely in minutes, there being a conspicuous absence of seconds or fractions of seconds. By such comparisons as this do we realize what we owe to the dryplate.

### Ozobrome Materials

So many inquiries have been received that it seems desirable to state that materials for the delightful Ozobrome process of carbon enlargement are not obtainable in America, and must be imported direct of the manufacturer, Thomas Illingworth & Co., Ltd., Willesden Jct., London, N. W., England.

### Blisters and the Fixing-Bath

BLISTERS on gaslight or bromide prints are most likely to appear upon placing them in the wash-water, the immediate cause being either a sudden change in temperature or allowing the water from a faucet to fall directly on the prints. But the real cause lies in the imperfect chemical action of the acid-alum fixing-bath. Either it has been entirely exhausted, or, what is far more likely, its hardening-properties have been impaired by the absence of sufficient acid.

Paper costs more than the fixing-bath, and it does not pay to overwork the latter. To fix two gross of 4 x 5 prints or an equivalent surface-area is about all that can be expected of a standard 64-ounce acid-alum bath. An exhausted bath has a characteristic clouded sediment, it will be frothy when violently agitated and suds will remain on the surface. Care must also be taken to keep the bath acid while in use. A chemical test may be applied if desired according to E. J. Wall in his article on the fixing-bath in PHOTO-ERA for March, 1916. Make a 10-percent solution of phenolphthalein in alcohol; put some of the fixing-bath into a graduate, and in white light let one or two drops of the alcoholic solution fall into it, and stir. If alkaline, a rich rose-red color is at once produced, and more acetic acid must be added until no change in color occurs upon further tests.

This change from acidity to alkalinity of the fixing-bath is due to the fact that each print transferred to it from the developer carries with it a certain quantity of alkali which in time will neutralize the acid of the fixing-bath. This explains the importance of thorough rinsing of the prints between developer and fixing-bath, if long life of the latter is to be ensured and stains are to be avoided. When prints are rinsed in an acetic acid stop-bath instead of water the alkali of the developer is neutralized before the print is immersed in the fixing-

STATE OF THE WEATHER	HOURS OF THE DAY						
	8	9	10	11-1	1-2	2-3	3 and after
Very brilliant and clear, wind steady from W. or N. W., very deep blue sky, and absence of red rays at sunrise or sunset. Time employed .....	Min. 15	Min. 8	Min. 6	Min. 5	Min. 6	Min. 7	Min. 12-30
Clear, wind from S. W., moderately cold, but a slight perceptible vapor in comparison with above. Time employed .....	16	12	7	6	7	8	15-40
Sunshine but rather hazy, shadows northward, not clearly defined. Time employed .....	25	18	14	12	14	16	25-40
Sun always obscured by light clouds, but lower atmosphere clear from haze and vapor. Time employed ..	30	20	18	16	15	20	35-50
Quite cloudy, but lower atmosphere free from vapors. Time employed .....	50	30	25	20	20	30	50-70





*Copyright, 1916, E. G. Dunning*

DICKIE'S BREAKFAST  
SECOND PRIZE — SUBJECT FOR PHOTO-ERA COVER  
E. G. DUNNING



bath. This method is preferable, not only for the reasons already given, but because it checks development instantly when the desired depth has been reached, and prevents the possibility of uneven spots and streaks. It is the only way by which certainty of exact duplicate prints with identical values and gradations is ensured.

Always immerse prints quickly and completely in the fixing-bath, and face up. Air-bells forming on the surface of prints fixed face down, unless a short-stop bath has been employed, will prevent uniform fixation, development continuing under the air-bells and forming dark spots. When fixing prints in large quantities, continue to immerse them face up for about ten minutes and then turn the entire batch face down. Continue immersing more prints face up for another ten minutes and then remove the first batch to the wash-water and turn the second batch face down. In this way the different batches are kept separated and each print is thoroughly fixed.

### Eyesight

Most workers in the photographic profession sooner or later have trouble with their eyesight, and many put it down to the peculiar effect of the electric light or the irritating fumes given off by flash-powders. I have also heard the cause attributed to too much smoking, and, again, to harmful effects of the red light. No doubt all of these things can cause trouble to the eyes, but in most cases the change is one that comes to almost every one in time, no matter what his profession may be. But the photographer, whose whole calling needs keen visual acuity, is apt to fancy that his profession suffers more than most.

The trouble usually shows itself in the form of finding an inability to focus the image properly on the ground-glass screen. Especially is this the case with interiors and picture-copying and portraits in a low key. In the case of outdoor-groups and bright landscapes the trouble may not be noticed, because the brilliance of the image adapts the pupil of the eye somewhat, closing it slightly, and thus sharpening up the image on the retina, much in the same way as the photographic image is sharpened by stopping down.

The trouble, nine times out of ten, is simply presbyopia, or old sight. It is not an error of refraction at all, but simply a physiological change, which is always taking place in all of us, and which usually shows its symptoms at about the age of forty or forty-five. If in youth there has been any degree of far sight — very often without it being known — the symptoms appear at an earlier age; while some are so short-sighted in youth that they never suffer from its effects. These are they who boast that at seventy they can still see to thread a needle.

When we are young we can bring to a focus on the retina of the eye objects which are close to us, such as the image on the focusing-screen — probably nine or ten inches from our eyes. But as we grow older, the minimum distance at which we can see things clearly increases, until there comes a time when it is greater than the distance we hold our head away from the screen when under the focusing-cloth. Then we complain, perhaps, that the electric light is affecting our eyes, whereas all we need is a pair of spectacles properly computed to bring our minimum distance of clear vision back to a convenient amount for focusing and reading. There should be no fear of losing caste by wearing them. They must be worn if good work is to be continued and the danger of permanent strain eliminated. So, as soon as the trouble appears, it is best to go to an oculist and place yourself in his hands.

Many workers resort to a focusing-magnifier when this trouble appears, and neglect the spectacles, which are necessary for reading and all close work. A magnifier can, of course, be very useful in its proper sphere — that is, for critical focusing of fine detail. One should be chosen of about two inches focal length. If it be of the telescopic pattern, when the best position has been found it may be fixed by means of a ring of cardboard cut off to the correct length and glued around. The proper way to set it is not to focus an image, but to focus up the grain of the ground-glass when the camera is facing a window. Then when the magnifier is fixed in the correct position, the sharp ground-glass will not be mistaken for a sharp image, which I have known to occur when a worker first uses a magnifier.

In the case of a retoucher or finisher, it is best to measure carefully the distance at which the work is kept from the eyes and to mention the type of work and the working-distance to the oculist. This will assist him to judge exactly what power of spectacle-lens to fit. A word should be said here of the danger of allowing the work to approach too closely to the eyes. There is no need to see the effect of every individual stroke of the pencil. To attempt to do so simply causes a continual strain upon the internal recti muscles of the eyeball — giving symptoms of which so many retouchers complain. By sitting well back to the work, the eyeballs will be more nearly parallel and the work will be seen as a whole.

Lastly, every four years or so the oculist should be revisited, because a change of power will be required. This is not because the eyes are getting weaker through wearing glasses. The visual acuity will probably be as good as ever, but new lenses will be required, because the accommodative power of the eye has become less. — A. G. WILLIAMSON, in *The British Journal of Photography*.

### A Lasting, Non-Staining Pyro Tank-Developer

At the Croydon Camera Club, London, England, March 15, Mr. W. G. Cullen gave the result of some interesting experiments made by Kodak, Ltd., to discover a satisfactory substitute for the metol-hydroquinone developer for negative-work on a large scale. The following formula was advocated:

Sodium sulphite, crystals .....	10 ounces
Potassium metabisulphite .....	1½ ounces
Pyro .....	1 ounce
Sodium carbonate, crystals .....	3½ ounces
Potassium iodide .....	4 grains
Water .....	140 ounces

First dissolve the sulphite and metabisulphite together in the water brought to the boiling-point for a minute or so. The pyro, carbonate and iodide are added after the solution has cooled to normal temperature. A bath of this developer has been in use for six weeks, during which time three or four dozen half-plates a day have been developed in it. Nor is six weeks necessarily the limit of time during which this solution will remain in working-order and yield excellent, clear, stainless negatives. Of course the bath will slow down after about six days' use, and in about nine days it will cease to develop; but as soon as it slows down the bath should be revived by adding 1 grain of pyro per ounce of solution. Although the solution becomes discolored with the lapse of time, this has no deleterious effect on its developing and non-staining qualities.

The slight trace of potassium iodide has proved efficacious to prevent dichroic fog, which gave trouble when this experiment was first undertaken.





HONORABLE-MENTION PRINTS

SUBJECT FOR PHOTO-ERA COVER

Left to right: "Pals," B. F. Langland; "A Partial Wetting," William H. Zerbe; "Just Kids," A. M. Vinje; "Harvest-Time," Charles A. Hughes; "The Coquette," Alice Willis; "In Haying-Time," J. H. Field.





# BEGINNERS' COMPETITION



Closing the last day of every month  
Address all prints to PHOTO-ERA, Round Robin Guild Competition  
383 Boylston Street, Boston, U. S. A.

## Prizes

*First Prize:* Value \$5.00.

*Second Prize:* Value \$2.50.

*Third Prize:* Value \$1.50.

*Honorable Mention:* Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

A certificate of award, printed on parchment paper, will be sent on request.

*Subject* for each contest is "*Miscellaneous*"; but only original prints are desired.

Prizes, chosen by the winner, will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

## Rules

1. This competition is open only to members of the Round Robin Guild. Membership, however, is free to all subscribers; also to regular purchasers of PHOTO-ERA on receipt of their name and address, for registration, and that of their dealer.

2. All Guild members are eligible in this competition provided they never have received a prize from PHOTO-ERA other than in the Beginners' Class. Any one who has received only Honorable Mention in the PHOTO-ERA Advanced Competition still remains eligible in the Round Robin Guild Beginners' Competition; but upon winning a prize in the Advanced Class, one cannot again participate in the Beginners' Class. Of course, beginners are at liberty to enter the Advanced Class whenever they so desire.

3. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. *Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.* Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P. or black-and-white paper having the same gradations and detail.

4. *Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data. Criticism on request.*

5. *Each print entered must bear the maker's name, address, Guild-number, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what contest it is intended.*

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit being given.

7. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with *double thicknesses of stiff corrugated board, not the flexible kind, or with thin wood-veneer.* Large packages may be sent by express very cheaply and with indemnity against loss.

## Awards — Beginners' Contest

Closed April 30, 1916

*First Prize:* William J. Wilson.

*Second Prize:* A. C. Sheldon.

*Third Prize:* Mrs. H. G. Reed.

*Honorable Mention:* Dr. W. G. Adams, Margaret Anderson, James Bowers, J. Louis Cunningham, H. B. Rudolph, M. C. Still, W. G. Takagi, D. A. Timmons.

Special commendation is due the following workers for meritorious prints: Marguerite Balthrope, G. M. Bibby, E. M. Boyd, J. F. Eden, B. S. Grenelle, Louis R. Hastings, Vincent Irwin, A. M. Kopcock, J. E. A. Lemieny, Irving S. Lovegrove, Louis R. Murray, Clarence A. Pierce, Kenneth D. Smith, Rev. Paulus W. Weber, Jos. G. Whetson.

## Why Every Beginner Should Compete

THE trouble with most competitions is that they place the beginner at a disadvantage. If advanced workers be allowed to compete, beginners have little chance to win prizes, and so quickly lose interest after a few trials.

There are two monthly competitions in which prints may be entered with prizes commensurate with the value of the subjects likely to be entered. They are: The Round Robin Guild Competition and the PHOTO-ERA Competition. The former is the better one for a beginner to enter first, though he may, whenever it pleases him, participate in the latter. After having won a few prizes in the Beginners' Class it is time to enter prints in the PHOTO-ERA Competition for advanced workers.

As soon as one has been awarded a prize in the PHOTO-ERA Competition, he may consider himself an advanced worker, so far as PHOTO-ERA records are concerned, and after that time, naturally, he will not care to be announced as the winner of a prize in the Beginners' Class, but will prefer always to compete in the PHOTO-ERA Competition for advanced workers. In accordance with this natural impulse, it has been made a rule by the Publisher that prize-winners in the Advanced Class may not compete in the Beginners' Class.

To measure skill with other beginners tends to maintain interest in the competition every month. Competent judges select the prize-winning prints, and if one does not find his among them there is a good reason. Sending a print which failed to the Guild Editor for criticism will disclose what it was, and if the error be technical rather than artistic, a request to the Guild Editor for suggestions how to avoid the trouble will bring forth expert information. The Round Robin Guild Departments, including those of personal counsel and criticism, form an endless chain of advice and assistance if members will connect the links.

## Toning with Copper

THE following bath is said to give a fine warm-brown tone to bromide or gaslight prints treated with it after fixing and washing. A one-percent solution of copper sulphate has sufficient ammonium carbonate added to it to redissolve the precipitate which first forms. A two and one-half percent solution of potassium ferricyanide is then made up, and to each ounce of this twelve minims of the copper solution are added.

*Photography and Focus.*



# THE ROUND ROBIN GUILD

An Association of Beginners in Photography  
Conducted by KATHERINE BINGHAM



*This association, conducted under the auspices of PHOTO-ERA, and of which PHOTO-ERA is the official organ, is intended primarily for the benefit of beginners in photography. The aim of the association is to assist photographers by giving them information, advice and criticism in the Guild pages of PHOTO-ERA and by personal correspondence. Membership is free to subscribers and regular purchasers of the magazine sending name and address to PHOTO-ERA, The Round Robin Guild, 383 Boylston Street, Boston, U. S. A.*

## Blue-Print Processes

WHEN one is on a vacation and wishes to know the results of one's photographic ventures without the bother of the more or less cumbersome equipment necessary for making developing-paper prints, the ever-ready and simple blue-print is an easy solution. It allows a reasonable amount of white light in loading, without damage, prints in sunlight and develops in water. It has no great latitude; and because a negative does not make a satisfactory print in this medium do not think it worthless, for it may do nicely on some grade of developing-paper.

The inclination in printing is to take the frame in too soon. The shadows should have a decided bronze color if the print is to hold up in the washing, otherwise the detail in the highlights will fade out, and the whole tone of the print will be weak and unsatisfactory. The washing should be thorough, that the whites may be clear, and the drying of prints in the sun is said to add to this brilliancy.

For some subjects the blue tone of the prints is very satisfactory. Such subjects as sea-views or moonlight-effects, for instance, are very suitably represented in this color. If, however, one does not like the blue tone for the subjects to be printed, it is possible to change the color by after-manipulations. Of the permanency of the results I am a trifle doubtful, and great care must be exercised in all manipulations to keep prints separated and free of finger-marks or other spots.

The formulas given are those suggested by A. J. Jarman. For platinum-effects take:

Water .....	12 ounces
Borax .....	2 drams
Strong ammonia water .....	2 drams

When the prints have bleached in this solution, wash well and then place in a saturated solution of gallic acid. As soon as the desired tone has been obtained, remove and wash well.

To obtain a sepia tone, prepare a stock-solution as follows:

Water .....	3 ounces
Tannic acid .....	1 dram
Hydrochloric acid .....	8 drops

For use, take 1 dram of this solution to 6 ounces of water. Place the prints in this diluted bath and allow them to remain for two or three minutes, then wash well and transfer to a solution of potassium carbonate,  $\frac{3}{4}$  ounce to 15 ounces of water. When the desired color is obtained, wash well and dry.

Very interesting things may be done by the use of blue-print fabric retoned. If one lives in a university-town, or where there is a high school of sufficient size, a pretty sum may be earned by making pillow-tops and such like, using school-subjects. The most satisfactory thing to do, if much work of the sort is to be done, is to make enlarged negatives of the desired subjects.

One can go in for just as much elaboration of border-printing and so forth as he desires; but the most satisfactory pillow, after all, is one without the white border — one in which the whole space is filled by the picture. Of course, if one cares to undertake double-printing, and tint the border deeply, the effect is better, but the fabric is less easily handled in this way than paper, as it is prone to stretch out of shape when such large pieces are used. The subjects for such work must be rather large and forceful. A good picture of the school-buildings, the campus, the basket-ball, football or baseball teams, or any familiar scene that would appeal to the students.

Some very artistic arrangements of ferns and the more delicate flowers may be made and printed without the need of a negative. The slender curving fronds of the bulbet bladder fern are particularly suitable for this purpose. Pin-cushions and book- or magazine-covers may also be made in this way, and numerous other things will suggest themselves.

## Troubles in Hot Weather

MANY are the difficulties that lie in the path of the unsuspecting amateur who tries to pursue his usual course when the hot, moist weather of summer comes upon him. Things go wrong, and he is at a loss to account for the trouble, due wholly to temperature.

The chief difficulty is encountered in developing the film. If the temperature of the developing-solution rises much above 70 degrees, the action is greatly accelerated, and the image flashes up quickly all over the plate, looking like overexposure. The tendency, then, is to cut development short, and a flat negative is the result. The increased temperature also increases the softening-action of the developing-agent, and the plates are apt to frill at the edges. Great care must be taken to handle them as little as possible, and by no means to let the fingers touch the softened emulsion, as a very slight pressure will cause abrasion or blistering when in this condition. If a fresh fixing-bath has been prepared, be sure it has stood long enough to be approximately of the same temperature as the developer, as the dissolving chemicals will greatly lower the temperature, and too sudden a change from warm to cold will produce that irremediable catastrophe, reticulation, a condition in which the whole surface becomes checked by small lines, causing it to take on the appearance of an Italian mosaic.

When ice is obtainable, the best way is to make up the solutions with cooled water; and if much developing is to be done, set the tray in a dish of cracked ice. If ice is not obtainable, water may be cooled by allowing it to stand in a porous receptacle or by wrapping wet cloths around the container and thus cooling by evaporation. When the heat is excessive, it is sometimes best to soak the plates in a weak solution of formaldehyde before washing. This hardens the gelatine and prevents the frilling which might take place if the wash-water is warm.





“THE GRAY SKIRTS OF A COMING SQUALL.”

WILLIAM J. WILSON

FIRST  
PRIZE  
BEGINNERS  
CONTEST

In the handling of developing-papers, also, care must be exercised, as blistering and frilling may result from the same causes that produce them in films and plates, namely, careless handling and sudden change of temperature. If the tap-water is too warm, it is better to wash prints by the five-minute bath-process — changing them ten or a dozen times, using cooled water and being sure that they are well separated by handling in each change.

All solutions will work more energetically and quickly at a high temperature, and it is often advisable to dilute them somewhat from the winter strength. When a saturated solution is used, as for bromide, the point of saturation is reached sooner in winter, and the solution will be less strong, something to be remembered when using all solutions made in that way.

#### Making Library-Paste

THE essential point or secret of making dextrine mounting-paste, commonly known as library-paste, and which is largely used for photographic purposes, is the temperature at which the dextrine is dissolved — namely, 160 degrees. If this temperature is adhered to the method can be depended upon to give an excellent paste, practically identical with that which is sold under various trade-names. The paste is used for mounting-purposes either as prepared or thinned down with water, according to the substance of the mount.

The formula follows:

White dextrine .....	2 $\frac{3}{4}$ pounds
Water at 160 degrees .....	2 quarts
Oil of wintergreen .....	0.8 cc.
Oil of clove .....	0.8 cc.

Bring the water to 160 degrees F. and stir the dextrine in slowly, taking care not to allow the temperature

to vary more than 1 degree either way until the dextrine has dissolved to a perfectly clear solution. As soon as the dextrine has passed into solution, add the essential oils slowly, stirring all the time. After this has been done, allow the solution to cool, and then pour it into bottles and cork. These bottles must then be set aside for a week or two to permit the paste to congeal. As soon as the paste “sets” it will have a perfectly white color, and will possess the firm consistency which is characteristic of library-paste. In order to use it, it is necessary to add a little water and work it around with a brush.

In preparing this paste care should be taken to use the best grade of white dextrine. The whole secret of the process of manufacturing is in maintaining the temperature at 160 degrees. At this temperature the dextrine undergoes certain peculiar molecular changes, and any serious variation from it results in a very inferior product.

*Transactions of the American Metallurgical Society.*

#### A Use for Matte Varnish

THOSE who use a lantern for enlarging know that it is a considerable advantage to insert between the light and the negative a piece of finely ground glass. If this is not obtainable easily, an excellent substitute can be improvised by coating one side of one of the lenses of the condenser with ordinary matte varnish. Unless the heat is so great as to injure the varnish, which is highly improbable in the case of an ordinary enlarging-lantern, the side next the light may be coated; but if there is any risk of this the inner surface of the lens which is next the negative may be chosen. It will be found that this evens up the illumination without necessitating more than a very slight increase in the exposure.— *Photography and Focus.*





## ANSWERS TO QUERIES



*Subscribers and regular readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Correspondence Department, PHOTO-ERA, 383 Boylston Street, Boston, U. S. A. If a personal reply is desired, a self-addressed, stamped envelope must be enclosed.*

J. W. R. — It is difficult to answer your query, because it is such a general request, and to all appearances one for very elementary information, which probably you do not need. However, a few general **observations on the use and characteristics of actinometers** may assist you.

As to the actual manner of calculating exposures with the Watkins Meter the explanation in the instruction-book, pages 7 to 10 inclusive, is clear and concise, and this matter you of course understand. The usual trouble in the use of actinometers lies in testing the light. The tendency is to examine the sensitive paper too closely. It should be held at arm's length according to directions, because the standard tint is not always matched in color, and it is relative depth of tone that counts. At arm's length the test is not confused by any slight difference in color. Again, the method of counting seconds is inaccurate, and ought not to be advised. The only satisfactory way is to observe the second-hand of a watch. The desirability of this is shown by the Wynne combination of the actinometer and stop-watch which has come onto the market and is being received with approval.

Of course, it is obvious that the personal equation — we refer to individual eyesight — plays an important part in the use of any actinometer. Even in summer sunlight there is an interval of ten seconds, sometimes more, when the standard tint has about been reached, during which it is difficult to determine whether the sensitive paper has become as dark as or darker than the standard. The tendency in the use of an actinometer is to get the test-time too long. Of course, in ordinary work this is oftener a virtue than a fault; but in focal-plane work it is quite the contrary, except at high speeds, when underexposure is inevitable. At low speeds the great light-efficiency of the focal-plane shutter tends toward flat negatives, unless proper allowance has been made after a correct measurement of the light. The Watkins Focal-Plane Meter gives exposure-readings just one-half those of the Bee Meter, although many workers give one-third normal exposures when using a focal-plane shutter at low tension, because they believe the light-efficiency of the focal-plane to be three times that of the average inter-lens shutter. Thus, in using a Focal-Plane Meter, the best success will be had when taking the actinometer-reading at the earliest possible second when the paper approximates the tone of the standard tint. In other words — risk under-timing in testing the light, to avoid over-timing of the plate or film later.

Beyond this your attention is called particularly to the holding of the meter with respect to the light and subject according to the amount of shadow-detail desired in the picture. When the shadows are not important the direct sun-test should be taken, as in open landscape, for example. In other instances the light which falls upon the worst-lighted part of the subject in which detail is desired should be tested. When full detail is wanted in outdoor-work, the meter should be

pointed to the sky in a direction at right-angles to the sun's rays, which should not fall upon the paper. All this is explained on page 14 of the instruction-book, and on page 15 there are ratios for reduction of the exposure-readings for such special subjects as snow-scenes, sea and sky.

Doubtless it is plain to you that, in order to stop the motion of an express-train or other high-speed object, the shutter-speed will probably have to be much greater than necessary to give the correct light-exposure for the plate or film in use. As stated on page 9, it is often convenient first to decide on the shutter-speed and use the meter to find the correct diaphragm to use, in which case it will be indicated against the selected speed after having set the meter properly in testing the light. This is particularly useful in focal-plane work at low tension. In very high-speed work the same information may be used in a different way. Suppose, for instance, that a shutter-speed of  $\frac{1}{700}$  second is necessary, and that the light-test shows that  $\frac{1}{200}$  second exposure will be required at F/5.6, the largest aperture. The meter shows that a working speed of F/4 is required to avoid under-exposure; but as the lens is only half that speed a 350 plate can be adopted instead of the 180 for which the reading was taken, thus meeting the difficulty.

C. I. R. — **An unsymmetrical anastigmat may be used for enlarging-purposes**, but it must be reversed so that the front lens, which, when used on an ordinary camera is towards the distant object, will be towards the bromide paper, whereas the back lens will be towards the negative. On this basis the lens will be employed under conditions similar to normal use in a camera, i. e., object *farthest* from the front lens and plate *nearest* the back lens. If an unsymmetrical lens is used for enlarging-purposes with the front lens towards the negative in the usual manner, the fine spherical correction will be lost, and even a fair result can be obtained only by the aid of a small stop. The more rapid the greater will be the defect.

T. H. A. — **The reason for your flat negatives made with a 3A Graflex fitted with a focal-plane shutter** is undoubtedly overexposure. The working-efficiency of such a shutter is fully three times that of the average between-the-lens shutter, for which most exposure-tables are intended. If you will adopt, for instance, the PHOTO-ERA Exposure-Guide, and divide the exposure-times given by three, you will probably succeed. Should you desire an actinometer, which actually measures the light-value with sensitive paper, the Wynne meter, costing \$2.50, is excellent; also the Watkins Bee and Heyde meters.

P. J. — **There are no panchromatic films on the market**, either in the form of rolls or packs. Panchromatic plates are obtained by bathing ordinary dry-plates in a 1 to 50,000 solution of a mixture of pinachrome and pinacyanol, viz., 3 parts pinachrome stock-solution, 2 parts pinacyanol stock-solution, water 250 parts. The stock-solutions are made to contain 1 part of the dye in 1,000 parts of alcohol.

The bathing-solution is prepared in a measure, the plates are dusted and laid in a flat porcelain dish, which is large enough to hold nearly twice the number of plates it is desired to sensitize at one time. These are put at one end of the dish; the dish is then tilted, and the dye-solution poured into the other (empty) end, then the dish is tilted back, so that the dye-solution sweeps over the plates in one even flow, free of air-bells. The dish is now gently rocked for three minutes, then the plates are removed and washed in a good stream of running water for at least another three minutes, and finally dried. They will remain good for several months if kept under proper conditions.



## PRINT-CRITICISM



*Address all prints for criticism, enclosing return-postage at the rate of one cent for each two ounces or fraction thereof, to Correspondence Department, PHOTO-ERA, 383 Boylston Street, Boston, U. S. A. Prints must bear the maker's name and address, and be accompanied by a letter, sent separately, giving full particulars of date, light, plate or film, stop used, exposure, developer and printing-process.*

M. C. S.—“After the Storm” appears to have been somewhat underexposed. Perhaps, however, a softer-working paper will to a certain extent tone down the present spotty effects of highlights.

K. D. S.—“Homeward Bound” and “Shadows” provide an interesting comparison showing the more pleasing effect of the presence of human life. The other two subjects are not distinctive as compositions.

R. M.—A buff paper would give you a more pleasing effect of sunlight than you now have in black, due to the color of the highlights and the warmth imparted to the shadows.

J. B.—“In Icy Fetters” is marred by a vertical line of higher tone across the image, apparently a spot of uneven development, probably due to neglect of some detail in the use of the tank.

T. D. F.—Of your several photographs of the Panama-Pacific Exposition “A Foggy Sunset” is the most pleasing, doubtless due to its excellent sky-effect. “The Dome” is somewhat too flat in tone, doubtless the effect of overexposure.

J. B.—You can improve your little home-portrait by rubbing down the three extreme highlights in the background with alcohol or silver-polish and then printing on a soft-working paper.

H. E. A.—As a composition “Sis” might have been more pleasing had the newspaper at the extreme lower lefthand corner been removed, as it places a strong highlight far from the center of interest. Indeed, the entire table, with its doily and potted plant, might better have been omitted, for it plays no part in the picture, and is unnecessary. There should be more space above the head, and perhaps this can be remedied by more careful printing. Try this on a matte-surface paper and you will find it more appropriate than a glossy.

K. F.—Your attractive picture does not belong in the portrait-class, as it is a genre. Furthermore, the figure is placed in the center of the picture-area; but with the print trimmed properly, it would be greatly improved. Moreover, you would have two pictures if you were to trim the print as it has been marked, namely, a genre, and, at the right, a still-life. Then, too, the picture is printed on linen-surface paper, which, while excellent for purposes of exhibition, renders it unsuitable for reproduction by half-tone, for which a print on smooth matte paper, and also a trifle deeper, so as to get more detail and character in the highlights, is more desirable. In printing this picture a little deeper, please see to it that the left

hand is retouched a little, so that the shadow cast by the flowers will not obscure it.

L. R. M.—Your snow-scenes are more interesting in composition than technique. Two of them are almost utterly lacking in detail and snow-texture, although this is not the case in “Going Home” and “Brook in Winter,” the latter being the most pleasing in the lot. Of course “Pines in Snow” is several shades too dark in the printing.

Of your portraits the profile is the most pleasing, although it is not quite a profile, yet does not show enough of the far side of the face to be otherwise. The lighting is good, but in the full-face pose the light is much too flat.

Of your night-pictures “The Corner at Night” shows rather too much halation about the street-lamps. The boat in “Moon on the Lake” would better have been more nearly in the trail of moonlight across the water.

G. M. B.—Your photograph “Sisters” seems to have been made with a soft-focus lens at too great an aperture. Of course white clothing is about the most difficult thing to manage with this type of lens, and the best success is had when the lighting is soft and the aperture medium. The negative has been overdeveloped, and so lacks texture in the highlights.

Of course the contrast in “The Musician” is far too great, the result of underexposure and forced development.

H. M. K.—The only fault of consequence in your photograph “The Old Farm-House” is the post in the foreground directly in front of the figure on the porch. Clever retouching would obliterate and leave a splendid subject for enlarging.

“The First Cast” is undertimed and the distant trees are too black.

J. H. J.—Both of your photographs seem to be lacking in the essential elements of a pictorial composition. The scenes pictured must of course be beautiful to the eye if they are to appear so in the photographs.

C. K. B.—Your portrait of a little girl is notably good for its spontaneous pose and excellent values. The expression of the eyes, however, seems peculiar.



“YOUR MOVE”

MRS. H. G. REED

THIRD PRIZE — BEGINNERS' CONTEST





AN AUGUST AFTERNOON

A. C. SHELDON

L. C.—Your four prints are undoubtedly interesting to you as records, but the material does not lend itself to pictorial treatment. The architectural subject is particularly deficient in that the vertical lines are not plumb.

E. H. K., Jr.—Of your several home-portraits "Marguerite" and "The Girl at the Window" are best because of the unobtrusive surroundings and soft lighting of the faces. In "Ethel" and "Crying Child" the backgrounds are unfortunate. Care should always be taken to avoid extreme highlights in the backgrounds unless one possesses the skill of working them out in making the finished print.

D. V. S.—Your otherwise excellent home-portrait has been spoiled by halation at the window in the photograph "Fireside Reminiscence." This should be rubbed down with alcohol or silver-polish.

L. L. H.—"An August Landscape" shows too much diffusion for the size of the print, and incidentally the subject seems to lack a center of interest.

O. O. H.—Your small prints are of excellent quality, particularly "On the Path of the Steel Giant" and "Whether We Look or Whether We Listen." They need enlargement to make the most of their excellences.

J. L. C.—The "Wooden Stag," is surely a "freak of nature," and interesting as such, but it has hardly the pictorial quality necessary to make it a suitable print for reproduction in PHOTO-ERA. There are magazines that have departments devoted to such things, where it would be welcomed just for its "freakishness." The effect of the print is rather dull and flat, seemingly due to overexposure, but the data do not indicate that. Perhaps the trouble was underdevelopment, though the fogged look at the right would indicate a stale plate or the possibility that a leaky holder might be at fault. An upright plate at closer quarters would have cut out some of the objectionable parallel lines of the tree-trunks and given a better composition. Trimming  $2\frac{1}{2}$  inches from left and  $1\frac{1}{2}$  inches from right concentrates the interest and greatly improves the whole effect.

L. V. R.—The conception of "A Study — Lilies," is excellent, but unfortunately the turn of the head is such that the profile is lost and yet not enough of the far side of the face shows.

"The Periodical" seems to be in rather too high a key throughout, there being insufficient depth and richness of tone in the shadows.

J. G. B.—"Christmas Eve" displays excellent negative-quality, but it seems to lack a center of interest, and the street-lamps give a decidedly scattered effect.

"The Park in Winter" also seems to lack a center of interest. The lines of the roadway lead to nothing in particular, and finally out of the composition altogether.

A. J. V.—"Woodland" seems to lack a center of interest, although this may be due in part to the fact that your enlargement is not of as good quality as the contact-print, particularly in the foreground, which is too light. Perhaps the illumination was inadequate, but in that case the whole print would be improved if two or three shades darker. The very slender tree-trunk across the foreground is exceedingly unfortunate.

H. C. M.—Your photograph "The Park Bridge" appears to have been enlarged beyond a reasonable degree for so smooth a paper. The substitution of a rough paper will to a great extent conceal this defect. The composition is good.

P. P. P.—Your photograph of a chrysanthemum appears not to have been made with an orthochromatic plate and color-filter, because the green leaves are almost lost in the dark background, the result being that the flower is far too prominent. It is almost invariably desirable when photographing flowers in a vase to include the whole of it in order to give the impression of having a base to stand on.

K. D. S.—Your several prints display good technical work, but indicate no serious attempt toward pictorial treatment. The composition of "The Brook in Winter" could hardly be better, and that of "Adirondack Turkeys" is also good, except that the background of trees on the horizon-line is unfortunate, the effect being spotty and distracting.



# Photo-Era Exposure-Guide

Calculated to give Full Shadow-Detail, at Sea-Level, 42° N. Lat.

For altitudes up to 5000 feet no change need be made. From 5000 to 8000 feet take  $\frac{3}{4}$  of the time in the table. From 8000 to 12000 feet use  $\frac{1}{2}$  of the exposure in the table.

Exposure for average landscapes with light foreground, river-scenes, light-colored buildings, monuments, snow-scenes with trees in foreground. For use with Class 1 plates, stop F/8, or U. S. 4. For other plates, or stops, see the tables on the opposite page.

*These figures must be increased up to five times if the light is inclined to be yellow or red. †Latitude 60° N. multiply by 3; 55° × 2; 52° × 2; 30° × $\frac{3}{4}$ . ‡Latitude 60° N. multiply by 2; 55° × 2; 52° × $\frac{1}{2}$ ; 30° × $\frac{3}{4}$ . §Latitude 60° N. multiply by $\frac{1}{4}$ ; 55° × 1; 52° × 1; 30° × $\frac{1}{2}$ . HOOR	MONTH AND WEATHER																			
	JAN., NOV., DEC. †					FEB., OCT. ‡					MAR., APR., AUG., SEPT. ¶					MAY, JUNE, JULY §				
	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull
11 A.M. to 1 P.M.	$\frac{1}{3}$	$\frac{1}{6}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{6}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{5}$	$\frac{1}{2}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$
10-11 A.M. and 1-2 P.M.	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{2}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$
9-10 A.M. and 2-3 P.M.	$\frac{1}{2}$ *	$\frac{1}{6}$ *	$\frac{1}{3}$ *	$\frac{2}{3}$ *	$1$ *	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$1$ *	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{2}$	$\frac{1}{5}$	$\frac{1}{2}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$
8-9 A.M. and 3-4 P.M.						$\frac{1}{5}$	$\frac{1}{2}$ *	$1$ *	$1\frac{1}{2}$ *	$3$ *	$\frac{1}{3}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{3}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$
7-8 A.M. and 4-5 P.M.											$\frac{1}{2}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{3}$	$\frac{2}{3}$
6-7 A.M. and 5-7 P.M.											$\frac{1}{15}$ *	$\frac{1}{8}$	$\frac{1}{2}$ *	$\frac{3}{4}$ *	$1$ *	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$
5-6 A.M. and 6-7 P.M.															$\frac{1}{10}$ *	$\frac{1}{5}$ *	$\frac{1}{3}$ *	$\frac{2}{3}$ *	$\frac{2}{3}$ *	$1\frac{1}{2}$ *

The exposures given are approximately correct, provided the shutter-speeds are accurately marked. In case the results are not just what you want, use the tables merely as a basis and increase or decrease the exposure to fit the conditions. Whenever possible keep the shutter-speed uniform and vary the amount of light when necessary by changing the stop. Focal-plane shutters require only one-third of the exposures stated above.

**SUBJECTS.** For other subjects, multiply the exposure for an average landscape by the number given for the class of subject.

**1/8 Studies of sky and white clouds.**

**1/4 Open views of sea and sky;** very distant landscapes; studies of rather heavy clouds; sunset- and sunrise-studies.

**1/2 Open landscapes without foreground;** open beach, harbor- and shipping-scenes; yachts under sail; very light-colored objects; studies of dark clouds; snow-scenes with no dark objects; most telephoto-subjects outdoors; wooded hills not far distant from lens.

**2 Landscapes with medium foreground;** landscapes in fog or mist; buildings showing both sunny and shady sides; well-lighted street-scenes; per-

sons, animals and moving objects at least thirty feet away from the camera.

**4 Landscapes with heavy foreground;** buildings or trees occupying most of the picture; brook-scenes with heavy foliage; shipping about the docks; red-brick buildings and other dark objects; groups outdoors in the shade.

**8 Portraits outdoors in the shade;** very dark near objects, particularly when the image of the object nearly fills the plate and full shadow-detail is required.

**16 Badly-lighted river-banks,** ravines, to glades and under the trees. **Wood-** interiors not open to the sky. **48 Average indoor-portraits** in a well-lighted room, light surroundings.

**PLATES.** When plates other than those in Class I are used, the exposure indicated above must be multiplied by the number given at the head of the class of plates.

# For Perpetual Reference

For other stops multiply by the number in the third column

## Example

As all the figures in the table opposite are based upon the use of stop F/8, or U. S. 4, it does not appear here among the ratios for other stops.

U. S. 1	F/4	× 1/4
U. S. 2	F/5.6	× 1/2
U. S. 2.4	F/6.3	× 5/8
U. S. 3	F/7	× 3/4
U. S. 8	F/11	× 2
U. S. 16	F/16	× 4
U. S. 32	F/22	× 8
U. S. 64	F/32	× 16

The factors that determine correct exposure are, first, the strength of light; second, the amount of light and dark in the subject; third, speed of plate or film; fourth, the size of diaphragm used.

To photograph an average landscape with light foreground, in Feb., 2 to 3 p.m., bright sunshine, with plate from Class 1, R. R. Lens, stop F/8 (or U. S. 4). In the table look for "Hour," and under the column headed "Bright Sunshine," note time of exposure, 1/16 second. If a smaller stop is used, for instance, F/16, then to calculate time of exposure multiply the average time given for the F/8 stop by the number in the third column of the table for other stops, opposite the diaphragm chosen. The number opposite F/16 is 4. Multiply  $1/16 \times 4 = 1/4$ . Hence, the exposure will be 1/4 second.

For other plates consult the table of plate-speeds. If a plate from Class 1/2 be used, multiply the time given for average exposure, F/8 Class 1, by the number of the class.  $1/16 \times 1/2 = 1/32$ . Hence, the exposure will be 1/32 second.

## Speeds of Plates on the American Market

Class-Numbers. No. 1, Photo-Era. No. 2, Wynne. No. 3, Watkins

Class 1/3, P. E. 156, Wy. 350, Wa.  
 Ilford Monarch  
 Lumière Sigma  
 Marion Record  
 Seed Graflex  
 Wellington Extreme

Class 1/2, P. E. 128, Wy. 250, Wa.  
 Ansco Speedex Film  
 Barnet Super-Speed Ortho.  
 Central Special  
 Cramer Crown  
 Eastman Speed-Film  
 Hammer Special Ex. Fast  
 Imperial Flashlight  
 Seed Gilt Edge 30  
 Wellington 'Xtra Speedy

Class 3/4, P. E. 120, Wy. 200, Wa.  
 Barnet Red Seal  
 Cramer Instantaneous Iso.  
 Defender Vulcan  
 Ensign Film  
 Hammer Extra Fast, B. L.  
 Ilford Zenith  
 Imperial Special Sensitive  
 Paget Extra Special Rapid  
 Paget Ortho. Extra Special Rapid

Class 1, P. E. 111, Wy. 180, Wa.  
 American  
 Ansco Film, N. C.  
 Atlas Roll-Film  
 Barnet Extra Rapid  
 Barnet Ortho. Extra Rapid  
 Central Comet  
 Imperial Non-Filter

Imperial Ortho. Special Sensitive  
 Kodak N. C. Film  
 Kodoid  
 Lumière Film and Blue Label  
 Marion P. S.  
 Premo Film-Pack  
 Seed Gilt Edge 27  
 Standard Imperial Portrait  
 Standard Polychrome  
 Stanley Regular  
 Vulcan Film  
 Wellington Anti-Screen  
 Wellington Film  
 Wellington Speedy  
 Wellington Iso. Speedy  
 W. & W. Panchromatic

Class 1 1/4, P. E. 90, Wy. 180, Wa.  
 Cramer Banner X  
 Cramer Isonon  
 Cramer Spectrum  
 Defender Ortho.  
 Defender Ortho., N.-H.  
 Eastman Extra Rapid  
 Hammer Extra Fast Ortho.  
 Hammer Non-Halation  
 Hammer Non-Halation Ortho.  
 Seed 26x  
 Seed C. Ortho.  
 Seed L. Ortho.  
 Seed Non-Halation  
 Seed Non-Halation Ortho.  
 Standard Extra  
 Standard Orthonon

Class 1 1/2, P. E. 84, Wy. 160, Wa.  
 Cramer Anchor

Lumière Ortho. A  
 Lumière Ortho. B

Class 2, P. E. 78, Wy. 120, Wa.  
 Cramer Medium Iso.  
 Ilford Rapid Chromatic  
 Ilford Special Rapid  
 Imperial Special Rapid  
 Lumière Panchro. C

Class 3, P. E. 64, Wy. 90, Wa.  
 Barnet Medium  
 Barnet Ortho. Medium  
 Cramer Trichromatic  
 Hammer Fast  
 Ilford Chromatic  
 Ilford Empress  
 Seed 23  
 Stanley Commercial  
 Wellington Landscape

Class 5, P. E. 56, Wy. 60, Wa.  
 Cramer Commercial  
 Hammer Slow  
 Hammer Slow Ortho.  
 Wellington Ortho. Process  
 W. & W. Process Panchromatic

Class 8, P. E. 39, Wy. 30, Wa.  
 Cramer Contrast  
 Cramer Slow Iso.  
 Cramer Slow Iso. Non-Halation  
 Ilford Halftone  
 Ilford Ordinary  
 Seed Process

Class 100, P. E. 11, Wy. 3, Wa.  
 Lumière Autochrome





## OUR ILLUSTRATIONS

WILFRED A. FRENCH



In one respect last month's cover-illustration was an innovation, in that hitherto no prize-picture has appeared in its usual place — the competition-section — and served as the initial picture of the same issue. Inasmuch as pictures for cover-designs were available — see PHOTO-ERA Competition below — it was deemed advisable to begin at once with the timely prize-picture by Fannie T. Cassidy — "Killarney Roses."

This month's initial illustration is the picture that won the first award in the "Subject for PHOTO-ERA Cover" competition. Its author, Dr. T. W. Kilmer, shares with such capable workers as Alfred W. Cutting and William S. Davis the honor to win several first awards in immediate succession, except that, in my opinion — and without detracting in the least from the credit of these gentlemen — Dr. Kilmer, in the present instance, has surpassed all his published efforts in the realm of portraiture, including even his superb portrait of Dr. E. L'H. McGinnis, which received first prize and appeared in June PHOTO-ERA. The present portrait is a triumphant example of portrait-characterization — broad, forceful and expressive, and in the pictorial treatment is reminiscent of Peter Paul Rubens. His friends, no doubt, will agree with my estimate of this admirable head, that it represents Dr. Kilmer in the fullness of his artistic powers. The picture is repeated on page 28. Data: Light coming from east window, bottom half covered; 11 x 14 camera; 18-inch Verito lens; stop, F/5.6; 12 seconds; 8 x 10 Stanley plate; 8 x 10 contact print on Artura paper, Grade E.

The frontispiece, portrait of Marie Leonhard, exemplifies the sympathetic phase in portraiture as contrasted to the somewhat indifferent treatment accorded the same individual by another photographer, whose effort was reproduced, with comment, in March PHOTO-ERA. Believing that Miss Leonhard's expressive countenance was capable of superior artistic interpretation, I induced the artist to sit to William Shewell Ellis. How well he succeeded in portraying the refined, sensitive features of the actress is demonstrated by the likeness published in this issue. No data.

The portrait on page 5 — the daughter of the photographer — displays the characteristics of Mr. Champlain's style in interpreting young womanhood. (See "How I Pose the Sitter," by Orrin Champlain, November PHOTO-ERA, 1915.) Among the points worthy to be studied is the arrangement of the hands, the *bête noire* of many workers. Data: May, north light; 11 x 14 Century portrait-camera; 14-inch Goerz lens, full aperture; 1 second.

Among the master-photographers of America is Frank Scott Clark, of Detroit. In the portrait-painter, Julius Rolshoven — page 9 — a native of Detroit, Mr. Clark had an interested, responsive sitter, and being himself a painter, as well as a photographer and a student of human character, he succeeded in producing a likeness that not only reveals the personality of the man, but a practical understanding of the rules of art. No data.

The two beach-scenes — pages 10 and 11 — commend themselves to artistic workers on account of their timeliness and the unfauling charm of childhood. The first suggests a pleasing, natural arrangement, with an absence of consciousness and preparation. The

spacing is excellent. It gives the feeling of roominess, so necessary to a picture of this character, and the tonal values are rendered faithfully. Data: August, 4 p.m.; diffused light; No. 7 4 x 5 Premo; Turner-Reich lens; stop, F/6.8; no color-screen used;  $\frac{1}{25}$  second; 4 x 5 Wellington A. G. plate; pyro-soda; 6 x 8 Enlarging-Cyko print; enlarged from front of plate through Verito lens; stop, F/11.

The other beach-scene is also a familiar sight. The figures harmonize so well in their arrangement that they seem to suggest the skill of the camerist. Whether he prepared or just caught the group, Mr. Gottscho is entitled to the credit of possessing true artistic understanding, also fine technical skill. The setting is, indeed, admirable, and the feeling throughout is exhilarating. Data: July, 11 a.m.; good light;  $3\frac{1}{2}$  x  $5\frac{1}{2}$  Kodak;  $6\frac{1}{2}$  R. R. lens; stop, 16; no color-screen;  $\frac{1}{5}$  second; roll-film; pyro tank-powder; enlargement on P. M. C. No. 2, from part of negative to 10 x 12; developed with Hydro-Duratol.

"Sunset," page 13, bespeaks for its delineator — an "occasional" camerist — a profound appreciation of the beauties of nature. The viewpoint was chosen with artistic discrimination, as a result of which we are favored with a picture of engrossing interest. Data: Actual title is "Sunrise," June, 4 a.m.; hazy but bright; Hawkeye camera, postcard size; Voigtländer and Sohn's Dynar fitted with Koilos shutter;  $\frac{1}{300}$  second; film; 7 x 10 enlargement.

The author of the series of views of Sweden, pages 14 to 17, is known to the older readers of this magazine as an amateur worker of marked artistic ability. This ability is evidenced, in no uncertain manner, in the pictures that illustrate the pictorial possibilities of his native land, and which, till now, has escaped the ravages of war. If it be spared the hapless fate of other countries, it will merit the attention of those tourists who are accustomed to visit continental Europe; for Sweden offers an abundance of scenery which, while not of overwhelming grandeur, is of placid and varied beauty. Its people, with their own history, customs and costumes, offer a refreshing contrast to those of older countries. But let us all be patient until peace is restored, and the choice of a journey's goal will soon be made; for to travel is to enlarge one's store of knowledge.

Again we greet the work of an old acquaintance — a portrait entitled "In Corduroy," page 19. Like the portraits of comely girls that have appeared in preceding issues, the present one excels in lighting, plastic-effect, modeling and general good taste. Data: 8 x 10 studio-camera; 14 $\frac{1}{2}$ -inch verito, F/5.5; August, 3 p.m., large north window; 2 seconds; Hamner plate; pyro.

The lessons taught by the pen and camera of W. S. Davis are always practical and helpful. The pictorial illustrations to his paper on tone-values, pages 20 to 23, are eminently instructive, and are recommended for careful study to every worker all along the line. Highlights and "lowshadows" without detail are to be avoided, except, perhaps, in extreme cases, and those are not pressing. No data.

The quasi-mythological subject, "Bacio di Luna," by Williamina Parrish, page 24, is a masterly achievement. The original print is the identical one that oc-

cupied a conspicuous place in the London Salon in 1915. The picture, somewhat suggestive of "Danæ and the Shower of Gold" — a favorite theme of the old masters — was made at Lake Como, Italy, in the daytime, although the title would seem to indicate otherwise. It bears the poetic title "The Kiss of Luna." The composition is certainly original, and, despite the adjacent masses of light and dark, it has unity, and the human figure dominates all. The picture cannot but invite criticism, including the assumption that the rock with the crowning figure, in itself, is sufficient for a complete and satisfactory picture, and that the rest of the landscape is superfluous. Certainly, the artist — had she so chosen — could have manipulated the negative so as to change the background of strongly contrasting tones to one of a possibly more artistically graded character. However gratuitous such a thought, it is merely one that will occur to speculative minds. Data: Afternoon, with full sun, at Lake Como; snapshot; 4 x 5 Premo camera; 11 x 14 kallitype print on Japanese tissue, enlarged from 4 x 5 film.

A more pleasing or harmonious composition to illustrate the subject "Figures in Landscape" than Dr. Ruzicka's "When We Were Little Boys," page 27, could scarcely be imagined. True, the figures here do not absolutely dominate the landscape; but eliminate them in imagination, or cover them up, and note the result! The younger readers of PHOTO-ERA, who may not be familiar with Dr. Ruzicka's pictures that accompanied the article by Phil M. Riley, "The Work of Dr. D. J. Ruzicka," published in PHOTO-ERA, September, 1913, should not neglect to look them up. They will be found very interesting and helpful. Data: 3A Kodak, equipped with a Zeiss-Kodak lens F/6.3 and a Compound shutter, and a 4 x 5 folding camera provided with a lens-board sufficiently large to take a 9-inch Smith Semi-Achromatic lens.

### The Photo-Era Monthly Competition

CONTRARY to expectations — on account of the apparent difficulty of the subject for competition — the entries for the "Subject for PHOTO-ERA Cover" contest were numerous and meritorious. Not only have two of the prize-pictures already served their purpose, but the third, Mr. Dunning's genre, as well as several of the Honorable Mention prints, will be used similarly.

The portrait of a grand old man, by T. W. Kilmer, M.D., front-cover and page 28, has been mentioned at the beginning of this column. "Killarney Roses," by Fannie T. Cassidy, was referred to in the June issue.

The last of the prize-pictures, "Dickie's Breakfast," which received the second award, appears on page 31. In originality of idea, Mr. Dunning's effort is second to none. The theme is one that challenges the skill and resourcefulness of the most experienced craftsman. Mr. Dunning, an accomplished portraitist, met the difficulties of the situation in a highly creditable manner. Naught but unstinted praise is due him for his success. There is no need to enumerate the details of the severe and daring task. They are obvious. As a composition, "Dickie's Breakfast" is strikingly original and effective. There is unity in the *ensemble*, undivided interest and admirable workmanship. Lest quibblers ask about the halation, I will say that, first, the effect produced is true to nature; second, if obviated — which was possible — the result would have been unfortunate, in that it would have destroyed the balance of the composition. Suppression of obtrusive detail in this case reveals the artist's superior judgment. Data: 9 o'clock; morning-sunlight; Spencer soft-focus (Port-Land) lens; Eastman portrait-film;  $\frac{1}{25}$  second; pyro, hand-developed; Eastman Etching Sepia, 8 x 10 Platinum print.

The group, page 33, "Pals," suggests a momentary pause in a long, tedious-wait for a "bite." Were the picture one of arrested motion, the charge of "posing for effect" might be considered justifiable. The little group finds itself in a delightful setting of a meadow with a promising stream. Altogether a strikingly effective composition. Data: August 26, 8 A.M.;  $3\frac{1}{4}$  x  $5\frac{1}{2}$  Premo film-plate camera; Zeiss-Kodak lens; F/6.3; Eastman film-pack; developed in tank with 20-minute pyro-developer;  $\frac{1}{2}$  second; stop, F/8; three-time ray-screen; enlarged on Artura.

"A Partial Wetting" shows a charming bather in a somewhat coquettish vein, uniting graceful action with pleasant animation, and relieved against a background of beach and water. A praiseworthy achievement, this! No data.

The group of youngsters, by A. M. Vinje, must be charged to the treacherous activity of a pocket-equipment. The element of humor imparts value to this little snapshot, for which no apology on the score of workmanship is necessary. Data: May, 3 to 4 P.M.; sunlight, slightly hazy; Press Graflex; 12-inch Dagor; stop, F/8;  $\frac{1}{100}$  second; Standard 5 x 7 plate; pyro in tray; M. Q.; Azo C. Hard; no retouching or "dodging" in printing.

Corn-shocks in a row, as a camera-subject, lack novelty; not so, however, one solitary corn-shock, particularly when favored with so picturesque a setting as the one by Charles A. Hughes. Data: October, late afternoon; misty; Seed L. Ortho; hydro-metol; Wollensak R. R.; stop, 8; 1 second; Azo print.

"The Coquette" invites attention. She will not be denied. Owing to the broad-brimmed hat that she wears, the face is in grateful shadow, enhancing the dark complexion that is undoubtedly hers. The picture is effective, too, because the hat, dress and coiffure are yielding in outline. Data: June, 11 A.M.; bright sun; 5 x 7 home-portrait; Zeiss Tessar; stop, F/6.3; Eastman portrait-film; pyro-acetone; Velours enlargement.

The mower lends himself admirably to a design intended to be striking — to arrest attention. The lighting is exceedingly good, imparting character to the costume and shading the face and hands of the figure. The low tone thus produced gives fitting substance and power to the subject. No data.

### The Beginners' Competition

THE winter-landscape, page 36, with its own, natural sky, is composed with care and an eye to balance of light and shade, although the distant trees, at the left, appear a little too insistent for a thoroughly satisfying artistic effect. The foreground is very pleasing and acts merely as an accessory to the general pictorial scheme. A little local negative-work would tend to improve several black places at the right. Data: March 17, 1916, 4 P.M.;  $2\frac{1}{4}$  x  $3\frac{1}{4}$  Icarette;  $3\frac{1}{2}$ -inch Carl Zeiss Icar; 4x color-screen; stop, F/16; light diffused by clouds;  $\frac{1}{2}$  second; N. C. film; Eastman's powders in tank; P. M. C. No. 2 Hard; Amidol.

The landscape, page 39, is typical of the country that runs along the Blue Ridge Mountains, and resembles very strongly a picture by L. F. Brehmer of a view in the Green Mountains with Mt. Kellington in the distance, and published in PHOTO-ERA several years ago. According to the art of picture-making, this ingratiating view appears to lack satisfying proportions, due chiefly to the group of trees, at the left, which are the prominent objects. To adjust this seeming defect, the beautiful right-hand section, including the mountains, would need to be sacrificed. To obviate such an act of vandalism, I would suggest that the negative be made to yield two different prints, each a complete and

(Continued on page 47)





# ON THE GROUND-GLASS

WILFRED A. FRENCH



## Our February Snowshoe Picture

RECENT the matter of faked photographs, which I made the subject of an editorial in the May issue, a subscriber took exceptions to my analysis of the picture "Snowshoe Tracks," the cover-design for February, 1916. See "Our Illustrations," page 92. Declaring himself thoroughly familiar with the practice of snowshoeing and the sort of marks the shoes produce in the snow, he virtually knocked my remarks into a cocked hat. Not being an expert in this method of self-propulsion, I referred my correspondent's criticism to the leading firm in sporting-goods in Boston, whose snowshoe expert declared it to be perfectly logical to assume that the photograph by Dwight M. Boyden was taken by the snowshoer immediately after making the tracks. This opinion was confirmed by a sportsman of considerable experience, both from a photographic and snowshoeing standpoint. His reasons are that the tracks in this picture are defined very sharply, and that, if the photograph was taken any length of time afterwards, the tracks would partly fill in, either from the wind or from the top crust caving in.

## Titles of Pictures

A MATTER that has been mentioned before in this department is the lack of originality of titles to pictorial photographs. As a result, contributors have avoided many threadbare titles; but of the new workers not a few still cling to such time-worn designations as "Wind-swept," "Meditation," "Windy Day," "Study," "The Meadow-Brook" and "Close of Day."

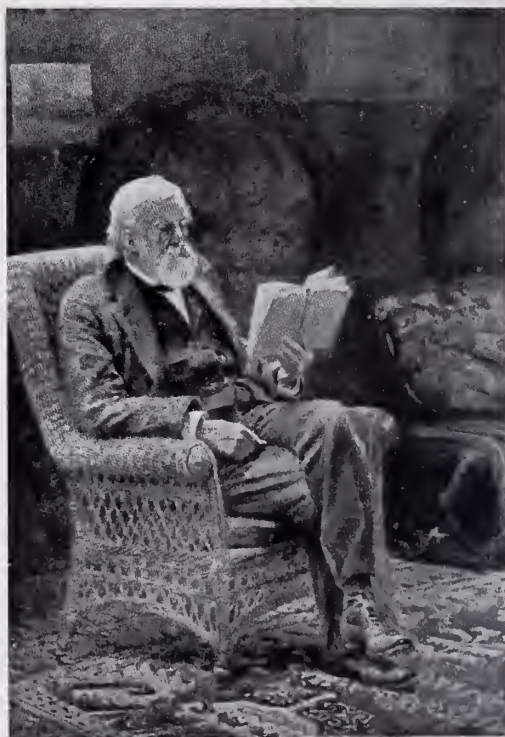
Those workers who find it hard to invent titles to their pictures — although it is more logical to begin with an idea and suit the picture to it — may benefit by the undeniable freshness of the names of paintings by Jean Crotti, exhibited, recently, in the Montross Gallery, New York. I have not seen the pictures, so cannot vouch for the character or quality of the artist's interpretive gifts; but it would be interesting to see the way amateur-photographers of ability and imagination would express these suggestive motives. Here is the list:

- |                          |                       |
|--------------------------|-----------------------|
| 1. Creation of Man.      | 11. Much or Nothing.  |
| 2. Sensitive.            | 12. That Depends.     |
| 3. Perfumes of Life.     | 13. Well Rather!      |
| 4. ? + !! = !?!          | 14. Isn't it?         |
| 5. Doubtless.            | 15. Because.          |
| 6. Why?                  | 16. Eh?               |
| 7. An Eternal Instant.   | 17. Sure.             |
| 8. Simply.               | 18. Intimate.         |
| 9. Of Course.            | 19. You Mustn't.      |
| 10. Unexpected Caresses. | 20. (Title Withheld). |

## The Reading-Pose in Portraiture

PROMINENCE has been given in these pages to poses in portraiture that are neither consistent nor natural, though pleasing in effect. A favorite pose is that of the sitter reading a book or a letter. In most cases the book is held by the sitter in his lap, which is about twice the distance required for the average normal vision. I admit that the book or letter held at the logical distance from the eyes, which is usually 16 inches, might conflict

with the artist's plan for a pleasing composition; but if the portrait-painter considers it admissible, why should not the photographer? Charles Copeland, the Boston painter, illustrates this point very admirably in his portrait of Alfred Ordway, published in *PHOTO-ERA* for November, 1904, and given, here, in conveniently reduced form. It all depends upon the treatment (lighting), although for the sitter to hold reading-matter in such a position several seconds presents a technical difficulty that most photographers may not care to face.



FROM A PAINTING BY CHARLES COPELAND

Of course, if the object of temporary interest is not printed matter, but an illustration, and one that may be seen easily at a distance of twenty inches or more, the pose is justifiable, and beyond the pale of criticism, except, perhaps, on the score of being overworked. The reading-pose, if reproduced literally, has one really objectionable feature, however — and one I have mentioned several times — and that is, the eyes appear to be closed, thus representing the sitter as if asleep. Like the lost eyes in a profile, this is one of the lost arts in portraiture, and can be remedied by overcorrection in directing the eyes.



# EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication



## Commercial Photography at Cleveland

A GREATER effort is being made to interest the commercial photographer in the P. A. of A. convention this year than ever before. For the first time in the history of the association there will be an exclusive class for commercial work, also accompanied by lectures and demonstrations of importance. Membership costs only \$2.25, payable to Jno. I. Hoffman, Secretary, Twelfth and F Streets, Washington, D. C., and every commercial man will profit by exhibiting, whether able to attend the convention or not. Prints, not exceeding three, should be addressed to Ryland W. Phillips, 917 Schofield Building, Cleveland, Ohio, marked "Commercial Class," and sent to reach there not later than July 17.

Mr. W. H. Bass, of Indianapolis, one of the most successful commercial men in the country, will give an illustrated lecture on "Building a Commercial Business," covering such points as sales-management, collections, figuring costs and advertising.

Mr. Ben. G. Heiser, of Cleveland, will also give practical demonstrations on the technical side of the work, contrasting right and wrong methods of preparing and photographing various articles of merchandise.

Messrs. Bass and Heiser will also judge the pictures entered in the commercial class, and be in attendance during the week to discuss the pictures with those interested. Surely this unusual opportunity to learn how to improve quality and make a greater financial success is one not to be missed.

## Sending Postage-Stamps

MANY things are done wrong because done in haste, and haste makes waste. A postage-stamp, or a strip of stamps, should *not* be attached to the letter by a corner or an edge, because, in being detached, such stamps frequently get injured, and they cannot be used as effectually as new ones. It is a poor compliment to the recipient. If it is too much trouble to enclose stamps in a piece of paraffined paper or in a small envelope, the sender may attach them properly, viz.:

Slightly moisten the center of the stamp, at the back, and then attach it to the letter. The reason for so doing is obvious.

*Never* — as is done frequently — place the stamps loosely in the envelope, between the letter and the envelope. This is a very careless practice and, unless discovered by the recipient, the stamps may be regarded as not having been received.

## Where Is This Place?

UNDER this caption we published a picture on page 205 of the April issue, and offered to present PHOTO-ERA for 1916 to each person sending a correct reply. On the closing-date, June 1, the only persons who had identified the locality were Miss Emily G. Hewey and Mr. Brooks Wells. The following is an extract from Mr. Wells's letter:

"The little 'island' you show on page 205 of your April issue is not quite, but almost, an island, and supports the picturesque little fishing-town of Lubec, Me., where many millions of small herring are boiled in oil and packed in sardine tins. It has also the distinction of being *nearly* the most

easterly town in the United States, and is separated from the island of Campo Bello, Canada, by a narrow strait through which the tidal currents rush tumultuously, as is shown in the enclosed photograph, which I made last Summer.

"With best wishes for your continued success,  
BROOKS WELLS."

Another reader, needless to say a woman, ingeniously asked us: "Is it not Lubec, Me., taken from across the Narrows, on or near the Campo Bello shore?" To her a six months' subscription was gladly awarded.

Among the many guesses, some of them highly amusing, were Halifax, Nova Scotia; San Juan Hill, Cuba; the Isle of Wight, and the following, which can hardly be considered a bull's-eye:

*Dear Sirs:*

The photograph "Where is this place?" published in the April PHOTO-ERA, is Tsing-tau, China, unless I am very much mistaken. The general shape of the "island," which is not an island, but a point of land helping to form Kiao-Chau Bay, is very much like that place, and the buildings, while too small to be positive about, resemble closely those put up by the Germans.

It has been almost seven years since I was there, as an American bluejacket, for only a few days, so I can hardly be positive from so small a reproduction.

Yours truly,  
R. T. C.

## Frederick Pohle, Inc.

THE well-known and popular studio at 9 West Chipewa Street, Buffalo, N. Y., has been incorporated under the above style, the incorporators being Frederick Pohle, A. O. Titus and Mrs. M. A. Pohle. Mr. Pohle has long been recognized as one of the ablest and most successful American portraitists, and Mr. Titus is well remembered both for his portrait in the Daguerre Memorial Institute permanent collection and for his posing-demonstrations in expression, character-study and facial delineation at the P. A. of A. convention at Indianapolis last year.

## The British Ministry Pays a Fine

ENGLISH courts have long enjoyed a world-wide reputation for justice quick and sure, which is quite as true of cases involving photography as any others. Surely, the reputation for quickness and certainty has been maintained in the latest instance, though, perhaps, the outcome might be more accurately described as judgment than as justice. It seems that a prominent photographer was instructed by the Ministry of Munitions to photograph a munition-factory in his vicinity, and, upon proceeding to do so, was at once summoned under the Defence of the Realm Act. In response to his appeal to the Ministry of Munitions, an official communication was despatched to the Chief Constable explaining that the photographer was acting in the employ of the Government, and requesting the withdrawal of the summons. This the police declined to do, the decision of the bench being that, because the photographer was not equipped with the regulation permit of a competent military or naval authority, he must pay a fine of five pounds and costs. More amusing still, both were paid by the Ministry of Munitions.



# Photo-Era a Reference-Library

(Continued from June issue)

THERE is no better reference-library of photography than that provided by back numbers of PHOTO-ERA. The variety of subjects treated has been great; the writers include the best authorities and most successful practical workers, both professional and amateur, and most of the articles are illustrated. Regular readers who have kept a file of the magazine, or had each volume bound, will find the appended classified lists and those to be published in subsequent issues of value for reference. **Missing copies may be had at 25 cents each as long as the supply lasts.**

## ANIMALS AND PETS

Photographing Dogs	Arthur G. Eldredge	June, 1915
My Animals and My Camera	Käte Hecht	Mar., 1914
Animal-Studies	William S. Davis	May, 1913
Cats and Kittens	Katherine Bingham	Dec., 1912
Animal-Photography	John F. Jones	Sept., 1910
A Chat about Cats and the Camera	Carine Cadby	Feb., 1910

## PORTRAITURE

How I Pose the Sitter	Orrin Champlain	Nov., 1915
Photograph the Baby!	Albert Niess	April, 1915
Home-Portraits of Little Children	Katherine B. Stanley	Dec., 1914
Indoor-Portraiture	Katherine Bingham	Sept., 1914
Outdoor-Portraits	Katherine Bingham	July, 1914
The Ideal Portrait-Negative	David J. Cook	June, 1914
Group-Portraiture	C. E. Kelsey	Jan., 1914
The Camera as an Interpreter of Human Character	E. H. Clement	Dec., 1913
A Study in Backgrounds	Sidney Allan	Nov., 1913
Individuality in Portrait-Photography	E. O. Hoppé	Oct., 1913
Incongruous Backgrounds	Wilfred A. French	April, 1913
Portrait-Photography for Amateurs	J. G. Alshouse	Feb., 1913
At-Home Portraiture	Katherine Bingham	Jan., 1913
Home-Portraiture	David J. Cook	Oct., 1912
Portraiture and Life	F. C. Tilney	Sept., 1912
Portraiture Out of Doors	David J. Cook	Sept., 1912
The Vice of Retouching	W. S. Crolly	Mar., 1912
Color-Values in Portraiture	Paul Lewis Anderson	Nov., 1911
Home-Portraiture That Is Different	Felix Raymer	Sept., 1911
Flesh-Values in Portraiture	A Symposium	Aug., 1911
Portraits without Retouching	Arthur Hammond	June, 1911
Some Thoughts about the Portrayal of the Human Figure	W. Ide	May, 1911
Some Notes on Home-Portraiture	Katherine B. Stanley	April, 1911
Indoor-Portraiture in Dull Weather	J. Peat Miller	April, 1910
Characterization and Individuality in Portraiture	Julius Robinson	July, 1909
Home-Portraiture	Fedora E. D. Brown	Dec., 1908
Hands in Relation to Face	Carine Cadby	Nov., 1908
Tonal Values in Portraiture	Dudley Hoyt	Nov., 1908
Home-Portraiture Using an Ordinary Window	Felix Raymer	May, 1908
Notes on Flashlight-Portraiture	F. J. Mortimer, F.R.P.S.	Feb., 1907

## MISCELLANEOUS

Night-Pictures	Katherine Bingham	Dec., 1915
The Possibilities of Mud-Puddles	William S. Davis	Oct., 1915
Vacation-Pictures	Katherine Bingham	Oct., 1915
Interiors with Figures	Katherine Bingham	Mar., 1915
Foregrounds	William S. Davis	Jan., 1915
Photography Among City Byways	Allen E. Churchill	Oct., 1914
Twentieth Century Stereo-Photography	Wilbur C. Smith	July, 1914
Still-Life	Katherine Bingham	Jan., 1914
Home-Scenes	Katherine Bingham	Dec., 1913
The Art of Book-Illustrating	Charles S. Olcott	Nov., 1913
Interiors with Figures	Katherine Bingham	Nov., 1912
Aeroplane-Photography	Charles G. Grey	Aug., 1912
How to Obtain and Use Cloud-Negatives	G. T. Harris	July, 1912
Panoramic Pictures with an Ordinary Camera	I. W. Blake	June, 1911
Photography at Night	Frank Sayles Dort	Mar., 1911
Hunting and Picture-Making Reminiscences	Charles G. Willoughby	Nov., 1910
Photography and Civic Improvement	J. Horace McFarland	Oct., 1910
Picturing Indians with the Camera	Frederic I. Monsen	Oct., 1910
How Wild Birds are Photographed	Chester A. Reed	May, 1910
Photographing Statues	Richard Percy Hines	April, 1908
Theatrical Photography	Arthur Payne	July, 1907
Firelight-Effects by Daylight	Henry Eschmigh Corke	June, 1907
Needleholes in Paper	Elwood Crane	May, 1907

## SLIDES AND THE OPTICAL LANTERN

The Enlarging-Lantern for Making Slides	E. Murray	April, 1915
Lantern-Slides in Natural Colors. I	William H. Spiller	Feb., 1915
Lantern-Slides in Natural Colors. II	William H. Spiller	Mar., 1915
The Breakage of Condensing-Lenses	Dr. A. Klughardt	Dec., 1914
Making Lantern-Slides at Home	Allen E. Churchill	Feb., 1914
Lantern-Slides by the Powder-Process	Harold Holcroft	Jan., 1913
Comparison of Methods of Making Lantern-Slides	Louis Derr	Feb., 1912
Stand-Development for Lantern-Slides	H. Bernard Ward, M. Sc.	Feb., 1912
Lantern-Slides Direct in the Camera	W. U. G. Bennett	Nov., 1911
Some Successful Lantern-Slide Tones and How to Use Them	T. Thorn Baker, F.C.S.	Feb., 1911
The Lantern at Home	C. H. Claudy	Feb., 1911
Projection of Opaque Objects	C. H. Claudy	Jan., 1910
The Coloring of Lantern-Slides	Edward Little Rogers	Jan., 1909
On the Care and Use of Lantern-Slides	F. A. Waugh	Dec., 1907
A Practical Introduction to Lantern-Slide Making	Rev. Thomas Perkins	Mar., 1907

## ENLARGING

Determining Correct Exposure in Enlarging	W. R. Preston	Dec., 1915
A Home-Made Adjustable Daylight Enlarger	Bruce Keith	Sept., 1915
An Enlarger for the V. P. Kodak	F. W. Bassett	Sept., 1915
A Home-Made Copying- and Enlarging-Camera	James Thomson	May, 1915
Enlarging from Unsuitable Negatives	Rev. A. E. Murray	May, 1915
Making Improved Negatives by Photographic Enlargements	P. K. Turner	April, 1915
Softening the Definition when Making Enlargements		Mar., 1915
A Parabolic Reflecting- and Enlarging-Lamp	F. A. Fahrenwald	Feb., 1915
The Breakage of Condensing-Lenses	Dr. A. Klughardt	Dec., 1914
A Simple Device for Making Enlargements	R. W. Dodson	Dec., 1914
Enlarging with a Fixed-Focus Enlarger	Phil M. Riley	Aug., 1914
Washing Bromide Prints	Lehman Wendell	Aug., 1913
Enlarging with a Box-Camera	Lehman Wendell	Mar., 1913
How to Make an Enlarging-Lantern	William S. Davis	Oct., 1912
Enlarging with a Soft-Focus Lens	Arthur Hammond	Feb., 1912
Fixed-Focus Enlargers	Leighton P. Coleman	Sept., 1911
Enlarged Negatives by Reversal	Charles Jung	Sept., 1911
A Home-Made Apparatus for Enlarging from Nature	John L. Wellington	May, 1911
Adjusting the Enlarging-Camera	C. Welborne Piper	Sept., 1910
Simultaneous Printing and Development of Enlargements	F. J. Mortimer, F.R.P.S.	July, 1910
Diffusion of Focus in Enlargements	F. J. Mortimer, F.R.P.S.	Dec., 1909
Enlarging by Incandescent Electric Light	A. E. Swoyer	Nov., 1909
Enlarging by Arc-Light without Condensers	L. F. Mitten	Sept., 1909
Enlarged Copies Direct	A. E. Swoyer	June, 1909
Enlarging with Your Own Camera	Edward C. Day	Feb., 1909
Enlarged Negatives from Transparencies	Joseph Knoff	Jan., 1909
Enlarging by a Novel Method	James W. Russell	Dec., 1908
Making Enlarged Paper-Negatives	George C. Elmberger	July, 1908
Enlarging on Gaslight Paper for Reproduction	E. F. Keller	July, 1908
Further Notes on Exposure in Enlargement	Frank H. Jeffrey	Feb., 1908
Daylight Enlarging with a Pocket-Camera	E. R. Plaisted	Oct., 1907
Exposure in Enlargement	Frank H. Jeffrey	Sept., 1907
Enlarging with the Lantern	C. H. Claudy	June, 1907
Combination Printing in Enlargements	C. Winthrop Somerville, F.R.P.S.	June, 1907
The Use of Bolting-Silk	F. J. Mortimer, F.R.P.S.	Jan., 1907

## COLORING

Coloring Prints with Oil-Colors	Lehman Wendell	Jan., 1914
Coloring Photographs with Transparent Watercolors	B. I. Barrett	Mar., 1911
The Coloring of Lantern-Slides	Edward Little Rogers	Jan., 1909
How to Color Photographs. I	B. I. Barrett	Dec., 1907
How to Color Photographs. II	B. I. Barrett	Jan., 1908
How to Color Photographs. III	B. I. Barrett	Feb., 1908
How to Color Photographs. IV	B. I. Barrett	Mar., 1908
How to Color Photographs. V	B. I. Barrett	April, 1908

(To be continued)

## Our Illustrations

(Continued from page 43)

attractive picture, comprising two-thirds of the picture-area beginning at the left and the right respectively. The material for such a process, as here presented, is ample and attractive in everything that constitutes an ideal summer-landscape. The values, perspective and definition are admirable. Data: August, 2 P.M.; intense sunlight; 3A Kodak; R. R. lens; stop, U. S. 16; 3-time color-screen; quick bulb-exposure; Standard Orthonon plate; pyro-tank; enlarged on No. 6 Bromide.

The delightful genre, page 38, represents a class of subjects in which PHOTO-ERA workers are beginning to show a commendable interest. The effort to portray child-life in an artistic fashion, as exemplified by Mrs. Reed, is grateful in more senses than one. The girl dressed in light and the boy in dark, marks the contrast the more sharply, and gives snap to an episode that suggests contemplation. The chance of success with such subjects is greater in the open — preferably on a covered veranda — than indoors. Data: Taken on front-porch; noon; bright light; stop, U. S. 8; Hammer Blue Label,  $3\frac{1}{4} \times 4\frac{1}{2}$ ; Rytol; tray-development; print on Azo A. A.

### A Photograph as a Punishment

THE first instance of this nature to come to our notice is reported by *Abel's Photographic Weekly*. It seems that an intoxicated man who had fallen in the street was arrested and taken before a Baltimore judge in the Central Police Court. The judge contemplated the prisoner, who was grimy and bloody from the top of his head to his shoulders and had a skinned nose, and finally said:

"The sentence I impose upon you is that you have your photograph taken just as you look now, and that you look at it every day for the next year. Just to see yourself as others have seen you I will dismiss the charge against you, but that photograph must be taken."

Of course it all depends on the man, but there are undoubtedly instances in which such a course would prove of real benefit, far greater than any ordinary sentence within the power of the court to impose.

### California Camera-Club

THE fourth international photographic exhibition, conducted by this flourishing camera-club of California, will be held in the Palace Hotel, San Francisco, Cal., November 4 to 12, 1916.

As this event is one of general interest, on account of the high artistic standard of work shown, it is hoped sincerely that American workers will bear the matter in mind. In our next issue we hope to publish further details, which are now being prepared by the committee in charge.

### A Creditable Prize-Competition

WITH commendable enterprise Forbes & Wallace, proprietors of the leading department-store in Springfield, Mass., inaugurated a prize-competition for amateur photographers of Springfield and vicinity, March 13 to 20 last. This was the firm's first venture of this kind, and the event was very successful, 421 prints of good quality, by 92 exhibitors, being shown. Forty dollars in cash was distributed among five prize-winners, as follows: First, Miss J. A. Smith; second, Frederick R. Listaire; third, Dr. J. A. Treichler; fourth, Walter E. Corkin; fifth, Chas. D. Todd. The jury was composed of Geo. W. V. Smith, curator of the Springfield Art-Museum, Chas. G. Sheldon, artist-illustrator, and Bayard B. Snowden, author and teacher.

Plans are being made for the 1917 exhibition, the details of which will be announced in a future issue of PHOTO-ERA.

### Hughes and the Photographers

THOSE photographers who asked Charles E. Hughes, when he was governor of New York, to use his influence to have what they considered a distasteful law repealed, may have gone away disappointed; but they certainly had reason to admire his wisdom and firmness. Most, if not all of them, will be ready, no doubt, to cast their votes for the man to whom has come an honor in a manner that is unparalleled in the history of American politics.

### Magazine-Covers

THOSE who take an interest in pictorial cover-designs, such as formed the subject of our May competition, have probably wearied, long ago, of the inane and silly faces that appear, month after month, on the covers of popular magazines.

Says the *New York Herald*:

"Fully half of these covers contain the portrait of a wax-doll with red cheeks and blue eyes, said to be a young girl. In some cases she stands beside a horse; in others she is alone in her foolishness. A current number of a widely circulated weekly shows her in company with a young man, both grinning idiotically. To illumine her face with the slightest suggestion of mentality would be a gross violation of the most sacred canons of magazine-art. The face of the girl one would like to marry never appears on a news-stand. Nor is it possible to find on any cover a cartoon or a picture to mean something or suggest an idea above the comprehension of a kitten."

It is no compliment to the men of intelligence to whom these anatomically impossible creations are supposed to appeal; and surely there are many American artists who are able to produce pictures that do justice to the typical American girl, to whose beauty and intellect, character and vivacity, writers and painters the world over have paid high tribute.

But why don't the publishers of these imaginary faces use direct photographs of real human beings? Photographs are much better in every way, and can also be printed in colors. Why not take a tip from PHOTO-ERA?

### Bromide Paper for X-Rays

BROMIDE paper is being used more and more as a substitute for dryplates. It has many advantages over the latter. Its price is lower and it can be handled more easily, especially the large sizes. Furthermore, the X-ray image obtained on bromide paper is direct instead of being reversed, as is the case with prints made from dryplates. When bromide paper is used for X-ray experiments a whole package can be exposed at a time without opening the envelope. This is accounted for by the simple fact that the X-rays penetrate through the several thicknesses of paper without absorption, giving several prints at once. With glass dryplates this is not possible, because glass is impervious to the largest portion of the rays.—DR. LEO BAEKELAND, *Laboratory of the Nepera Chemical Co., Nepera Park, N. Y., in Wilson's Photographic Magazine, February, 1897.*

### He Is Still Busy

*The successful one* — "The one essential in business nowadays, my dear sir, is — pluck."

*The unsuccessful one* — "Oh, we all know that. The trouble is to find some one to pluck." — *Exchange.*



## How To Become an Art-Critic

ALWAYS admire a Whistler.

If you are introduced to an artist it is no longer considered one of the essentials of good form to talk to him about his own work. If you will lead up to the subject discreetly he will save you the trouble.

It is equally important to avoid admiring anything because "it looks natural." It is safer to scorn all such works as being "photographic."

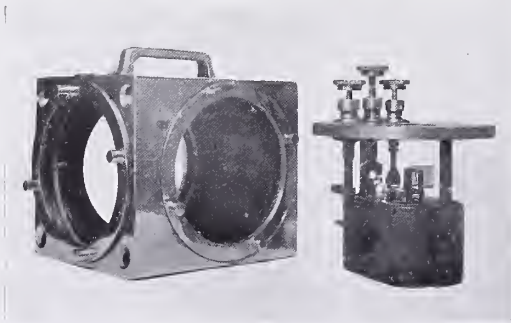
If you wish to direct attention to any particular picture, point with the thumb instead of with the finger. Though the fact is not widely known, most artists acquire this habit, probably, from the constant use of the thumb in manipulating paint or charcoal. To the knowing ones the use of this characteristic gesture will at once place you in the inner circle.

To complete the true professional pose when examining a work of art, it is necessary to throw the head very much to one side and gaze at the picture through half closed eyes. Next, look at the painting through the small opening that is left when the hand is loosely closed. The picture will not show to any better advantage when seen through the hand, and artists rarely adopt this method, but it is one of those ancient superstitions that the veteran connoisseur clings to, and the novice will, therefore, regard it as an essential.

When hard pressed for some comment you can always fall back on the word "interesting." There is something exceedingly professional about this word. It is the haven of refuge of many distinguished critics when describing execrable works by their friends, or by the chief officers of important art-organizations.

### *The Picture and Art Trade.*

Just how the picture-lover is to proceed when viewing a collection of photographs which is remarkable for being obscure of outline and detail, devoid of composition, harmony and taste, and morbid in character, is hard to tell. If no one is present, excepting the visitor, there is no need of advice; but if in case of a one-man show the author is in evidence, it may be well to adopt some of the suggestions offered in the foregoing article.



A Novel Under-Sea Camera

In the show-window of the Robey-French Company, Boston, Mass., has been displayed recently a distinct novelty in camera-manufacture, constructed under their direction by the Edson Mfg. Co., also of Boston, for Dr. Alfred G. Mayer, Director of the Carnegie Institute. It consists of a heavy copper case, with three circular glass windows and three thumb-screws working through packed boxes, like steam-engine piston-rods, all designed to permit the operation of a No. 0 Graphic camera at a depth of fifty feet under water with a pressure of twenty-eight pounds per square inch. Dr. Mayer intends to use this in the tropics.

## A Disappointing Color-Scheme

*Auto* — "I've heard a good deal about Italia irridenta. What does it mean?"

*Chrome* — "Only an iridescent dream; that's all."

## Removing Pyro-Stain From Negatives and Fingers

It occasionally happens that a negative developed in pyro-soda developer has an unpleasant strong brown color and yellow stain when the sulphite used is impure or has become oxidized. This staining is naturally more likely to occur when a dilute tank-developer is employed.

Attempts to remove this color and to convert the negative into one of good neutral tone by treatment with one or other of the various clearing-baths which have from time to time been recommended are usually unavailing.

We have worked out the details of a method which, in our hands, has given good results, and have pleasure in sending you the following particulars, which some of your readers will no doubt find of interest:

The stained negative should preferably be hardened first in a weak chrome alum solution containing one grain per ounce, unless it has been dried before the treatment is applied, as the film tends to become a little more tender in the process. It has then to be soaked for ten minutes in the following bath:

Potassium permanganate	.....	.50 grains
Common salt	.....	$\frac{1}{4}$ ounce
Acetic acid (glacial)	.....	1 ounce
Water to	.....	.20 ounces

After a brief wash it is transferred to the following solution:

Potassium metabisulphite	.....	1 ounce
Water to	.....	.20 ounces

and is kept there until the bleached image is quite white everywhere to the back of the film.

The image is then redeveloped in any non-staining developer, such as amidol or hydroquinone, when a good neutral black deposit with clean shadows is produced. All the processes are performed in daylight without danger of fogging.

The bleaching-solution recommended above appears to require nearly ten minutes to complete its work on a badly stained, heavily coated and dense negative; and as it is impossible to judge by inspection when this part of the process is complete, we recommend the adoption of this length of immersion for all cases. A too brief treatment can be recognized by the persistence of color in the bleached image after immersion in the metabisulphite solution, in which event the bleaching-solution should be reapplied; but up to the present we have not met with a case requiring more than ten minutes in the latter. It is very important that the action of the bleacher should be assisted by constant rocking of the dish.

In conclusion, those who use pyro in quantity will find this bleacher, followed by the metabisulphite solution, an excellent means for removing the unsightly stains from their hands due to pyro oxidation-products, which greatly annoy every professional photographer.

ILFORD, LTD., in *The British Journal of Photography*.

## A Studio-Joke

*The errand-boy* — "What is an auburn-haired lady?"

*Receptionist* — "Sh! A red-headed woman who has money, my boy." — *Exchange*.



On the day that this letter leaves England, we enter into possession of an extra hour of photographic daylight per day; for the daylight saving order, or "Summer-Time Act," as it is called, is to come into effect on the night of the 20th — 21st of May. Of course, everybody is conscious of the fact that it is only a dodge to get us all up earlier during these light mornings, and so encourage us to go sooner to bed, thereby saving the artificial illuminants, and that individuals could carry out the same scheme for themselves without legislation. But the fact remains that it is a good deal easier of accomplishment if the change is official. And when our clocks all point to eight, and the postman and the milkman arrive and corroborate the illusion, it will take a real lie-a-bed to insist on the untruth of summer-time; and photographers will most assuredly have an extra hour during the day in which the camera can be used. And this in itself is no mean advantage. "But what about exposure-tables!" exclaims the faddist, for he has discovered that moon will no longer be twelve of the clock. Well, he must settle this nice point for himself; but most photographers are not concerned with the mid-day lighting — the ugliest of the whole day — and many are rejoicing that they will be up and about one hour nearer those subtle, delicate tones that are to be seen only at sunrise.

Our photographic airmen have scored another success. Lord Hugh Cecil, who himself is an accomplished flyer, stated in the House of Commons during the aircraft debate that, besides having a machine-gun (the Lewis) that was envied all over Europe, our photographic work in the air was undoubtedly superior to that of the Germans. For obvious reasons, the public is allowed to know very little about this photography; but from time to time one hears, through photographic channels, of friends — who in the old days we connected with bromoil, or gum, or color-work, according to their particular bent — now being employed in one of the many delicate and technical operations connected with air-photography. It is to be hoped that, after the war is over, the authorities will allow the publication of some of these map-like impressions that daily pour into Headquarters, and are of such immense importance in modern warfare.

It is quite impossible to keep the war out of photographic notes these days. There is no phase of life all over the country that is not profoundly modified or in some way altered by the world-contest. How could it be otherwise when we have over four million men, drawn from every grade of society and almost every family, absorbed in the fighting and its auxiliary services. There may be photographers who still seek their recreation far from prohibited areas, portraying peaceful sylvan scenes. Personally, we have not come across them. The vast majority seize any spare moments at their disposal to record in a thousand different ways the war-influence as it is to be seen on every hand. This is work that needs doing, and can be done in no better way than by photography. As an instance and a sidelight on the fundamental changes being wrought in the people, we enclose two little prints. They represent a young friend of the writers of these notes. Before the war she was just a practical modern English girl, following the ordinary feminine pursuits like thousands of others. Now she has replaced a man of fighting age, and is rearing poultry and cultivating a garden. The changed conditions need different clothes, and no doubt produce a different and a broader view of life.

So it is on all sides, and we photographers can but record in black and white the exterior alterations; but for the physiological and psychological results of such drastic changes we must patiently wait till the war is over.

If anything, our military regulations with regard to photography are getting even more stringent. Even our popular Australian Premier's secretary has been getting into trouble. Mr. Shepherd, the private secretary, is a keen amateur photographer, and last week, when motoring back from Mr. Lloyd George's overflow meeting at Conway, he was struck with the Conway Bridge, and stopped the car to photograph it. He wanted only a snapshot with his hand-camera, but he got out of the car to take it from a good position and immediately one of the sentries was down on him. Mr. Shepherd explained who he was, and the innocence of his intentions, but all to no purpose. He was marched off under arrest to the guard-room. Subsequently, Mr. Hughes himself appeared on the scene and got his secretary released; but the films had to be sacrificed, as the officer in charge insisted on their being destroyed.

This severity over cameras was brought home to us this last week-end, which we spent by the sea. In ordinary times we should as soon think of traveling without a tooth-brush as without a camera, and from sheer force of habit we packed one of pocket-size. The very first evening our landlady asked to speak to us, and informed us in a hushed and nervous voice that the chambermaid had informed her that we had something illegal amongst our luggage, and it had been seen carelessly hung on a chair. By her manner it might have been a bomb, at least, that had been discovered, and we felt, indeed, guilty people. It appears that the latest rule is that no camera may be kept within two miles of the coast, so our little pocket-edition had to spend its holiday securely locked up in our box.

CARINE AND WILL A. CADBY.

### Fine Show Held in Bangor, Me.

THE Fotocraft Society, of Bangor, Me., held its fourth annual exhibition in the Fine Arts Gallery, Public Library, May 15 to 27, 1916. Among the prominent exhibitors were Paul L. Anderson, Charles J. Adams, Alice Boughton, Dr. George Buttler, Dwight A. Davis, William S. Davis, Gurdon R. Fisher, John H. Garo, Dr. Norman B. Humphrey, Charles B. Keeler, Dr. Rupert S. Lovejoy, Henry A. Peabody, Hubert F. Porter, W. H. Porterfield, J. Will Palmer, Jane Reece, Karl Struss, Edward H. Weston, Clarence H. White.

The photographers who were represented by paintings were Mr. Garo, whose well-known picture "Early Spring" excited general admiration; and William S. Davis, with five marines and landscapes of eminently delightful quality.

But why "Fotocraft," and not "Photocraft," gentlemen?

### Our "Miscellaneous" Quarterly Competitions

MANY workers produce occasionally pictures of exceptional merit and interest which do not seem to fit any classified subject in the PHOTO-ERA monthly competitions as announced from month to month. Instead of being held for a suitable competition that may not occur for a long time, such pictures may be entered in the competition for miscellaneous subjects to be held quarterly, beginning with February, 1917. One was held in May, this year.

The rules, including the award of prizes, that govern the regular PHOTO-ERA competitions for advanced workers will apply to these quarterly competitions which are to be known as "Miscellaneous."





# WITH THE TRADE



## America First!

THIS slogan is an admirable one for all Americans, despite the selfish spirit it implies. America first, by force of circumstances; hence little pleasure and profit by travel in the warring countries of Europe for the present! The war compels us to be less dependent on other countries than formerly. We must look to our own resources in productive ability and foreign commerce, where we are beginning to discover prospects of profit and satisfaction to a wonderful degree.

Hence, too, the varied beauty and grandeur of American scenery is receiving unusual attention. Enterprise is busy exploiting its wonders and charms, and already the hotels and railroads behold visions of enormous profits. But a visit to and a sojourn in these far-off garden-spots are attended by enormous expense, and the alternatives are to go or to stay at home.

A midway-course would be a visit to beautiful, historic and comfortable New England, where traveling and living-expenses are relatively low. Send for booklet and map, giving names of hotels, boarding-houses, farms, camps and cottages, Room 15, North Station, Boston, Mass., and be convinced!

## A Ballground Advertising-Novelty

MUCH of the success of present-day advertising depends upon the cleverness or originality of the idea, and it is refreshing occasionally to learn of a particularly notable instance in the photographic field. A case in point occurred at the opening of the baseball-season in Wichita, Kan., when a local studio-proprietor arranged to have a large sign erected on the grounds during the game, one board at a time, from the bottom upward. When completed, shortly before the end of the game, the announcement read:

FRED H. REED  
PHOTOGRAPHER  
PORTRAITS ONLY

The erection of this sign vied with the game itself in interest, and many bets were made as the work progressed as to the identity of the advertiser. In the presence of four thousand persons this novelty proved to be excellent publicity at a cost of \$25.

## A New Kind of Gem

THE proprietor of the jewelry-counter in A. S. Hawes & Co.'s photo-shop, on Boylston Street, was showing a customer an exquisite aquamarine recently. During a pause in the description of the aquamarine, given by the gem-expert, a German sailor of the S. S. *Amerika*, interned in Boston harbor, who had just purchased a camera of Mr. Hawes, stepped up and said:

"Excuse me, sir; but vaht iss de brice off dat beautiful submarine?"

## Photography and Shakespeare

IN recognition of the Shakespeare tercentenary, now being observed universally, F. M. Somers, the eminent portrait-photographer of Cincinnati, has issued in pamphlet form halftone-reproductions of "The Seven Ages of Man," accompanied by quotations from Shakespeare's comedy "As You Like It." The originals are the series of photographs made from living models by

James Landy, one of the old masters in photography, which won for him universal distinction, and which hang in the Shakespeare Memorial Library in Stratford-on-Avon. Price of the pamphlet, postpaid, is 30 cents.

## Graflex 1916

A NEW and beautiful catalog has just been issued by the Folmer & Schwing Division of the Eastman Kodak Company, Rochester, N. Y., which will interest every speed-work enthusiast. Procure a copy of your local dealer or write direct to the manufacturer. Printed on



excellent paper and attractively embellished, this catalog presents many examples of picture-making difficult to accomplish successfully with any other type of camera. While the Graflex line remains substantially unchanged one notices the addition of a 5 x 7 Compact Graflex, a model which proved especially popular in the original 3½ x 5½ size. Those to whom the Autographic feature of roll-film has made appeal will find that it has been incorporated in the 1A and 3A models. And the attention of professional workers is particularly directed to the obvious merits of the Home-Portrait Graflex.

## He Never Advertised in Photo-Era

*Isaacs* — "Cohen is going to retire from business for five years."

*Abrams* — "Oh, I hert him say dat before."

*Isaacs* — "Yes; but dis time der chutch of de court said it." — *Princeton Tiger*.

AUGUST

1916

15 CENTS

# PHOTO-ERA

The American Journal of Photography

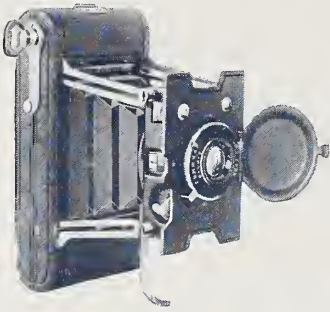


*Copyright, 1915, F. A. Walter*



# ANSCO

## CAMERAS & SPEEDEX FILM



*AnSCO Vest-Pocket No. 2.*  
Weight, 16 ounces. Size of picture,  $2\frac{1}{4}$  x  $3\frac{1}{4}$  inches. Equipped with Modico Anastigmat Lens, F 7.5, \$17.50; with AnSCO Anastigmat Lens, F 6.3, \$27.50.



The best answer is the one which comes to us too late, and the best chance for a good picture always presents itself when the nearest camera is miles away.

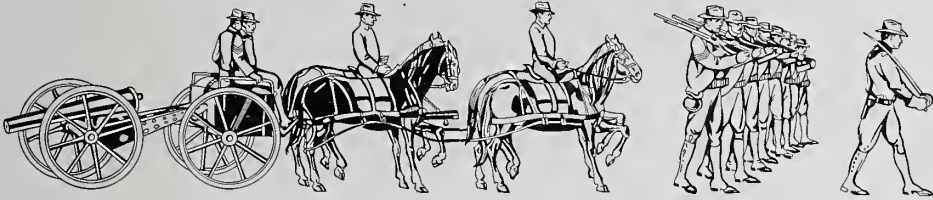
Get an AnSCO Vest-Pocket No. 2 and you will carry it with you always. It folds up compactly for carrying in a vest or coat pocket, weighs so little that you will scarcely notice its presence, and can be quickly brought into action for taking the unexpected picture.

It is the smallest and lightest camera made to take  $2\frac{1}{4}$  x  $3\frac{1}{4}$  pictures, and the only vest-pocket camera with a focusing device for use with an anastigmat lens. The pictures it takes are so clear and sharp they can be enlarged successfully.

Get an AnSCO 1916 Catalog from the AnSCO dealer near you or write to us for one and specimen picture on Cyko Paper made with this camera.



ANSCO COMPANY BINGHAMTON, NEW YORK



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WILFRED A. FRENCH, Ph.D., Editor and Publisher

PHIL M. RILEY, Associate Editor

KATHERINE BINGHAM, Editor, The Round Robin Guild

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RUSTIC BRIDGE  
JOSEPH MIXSELL



# PHOTO-ERA

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SPRING-CLOUDS

EDMOND J. SHAEFER

## A Live Camera Club in Detroit

PHILIP McCUTCHEON ARMSTRONG



UT in the great Middle West there is a city called Detroit, known hitherto for its automobiles, its rotten city government and the "Tigers," as well as many lesser attractions and otherwise too numerous to mention. It is the city "Where Life Is Worth Living," according to its press-agents, the city of the high wage and the still higher rent, though the latter fact is seldom dwelt upon in the booster's column. It is likewise the home of the Camera Club of Detroit, which, photographically speaking, is much more to the point.

The Camera Club of Detroit is a young organization, but it is a vigorous infant. A little more than a year ago, the club was born with a great

flourish and blare of trumpets at an open meeting of interested persons and newspaper reporters. It was organized with all the usual necessary committees, together with all the usual unnecessary ones, and a weird and wonderful constitution was adopted. The guiding genius of the organization was Mr. Pardington, whose wise counsel and skill in handling difficult situations were lost to the club shortly afterward by his death. The reins fell into the capable hands of Mr. Cecil H. Taylor, under whose management the club rented rooms and held several successful competitions and entertainments.

But a number of considerations hindered its growth, and after the early bursts of enthusiasm had subsided, not all of Mr. Taylor's schemes





SNOW AND TREES

ARCHIBALD P. WIGLE

and labors sufficed to keep the interest alive, ably seconded though he was by a handful of really earnest workers. And when Mr. Taylor, in midwinter, accepted an engineering-commission which kept him out of town the greater part of the time, things looked very dark, indeed, for the future of the club. It seemed that the newborn society would soon follow the example set by its several predecessors in the field, and quietly slide off the end of the toboggan into oblivion. Removal from the city, and death, had played havoc with the membership, and the changes in the personnel of the officers had been kaleidoscopic.

Early in March matters came to a head. It had been found necessary to have a certain few of the members guarantee the rent and other unavoidable expenditures of the club, and several

of the guarantors had, in one way or another, repudiated the obligation. This left a heavy burden on the remainder, and they declined to continue to bear it. Only a few of those most closely in touch with the situation know how narrowly the club escaped dissolution at this time. A meeting was held, and it was a stormy one. Mr. Taylor, home for a few days, added his appeal for continued existence to that of the president, and the upshot of the matter was that an executive committee was appointed, with unlimited authority, to take charge of the affairs of the club until it was on its feet again. This committee set to work with a determination to make things go that produced immediate results. The affairs of the club were carefully analyzed, and the causes for inaction were determined. Two principal flaws were detected, and the same ones



THE LIMITED

W. R. FIFE

could doubtless be found in every unsuccessful organization of the kind. They were, first, unattractive quarters and lack of incentive to join the club; and, second, the indifference of the members to this condition. These things had to be remedied at once if the club was to go on. As an example, it was necessary to climb two flights of stairs to reach the rooms, passing through a dentist's office on the way, and, when reached, they were a disappointment to a prospective member, and did little to inspire those already in. Dingy they were, an old third-rate professional studio, and most depressing. There was plenty of room — too much, if anything — but the place created a distinctly unfavorable impression.

The thing to do, obviously, was to procure new club-rooms, and this entailed financing in the change. Simultaneously, means to arouse in-

terest in the club had to be considered. The recital of the struggles of the committee would make a long book; but suffice it to say that their efforts were crowned with success. They engaged, in the Kresge Building — Detroit's newest and finest sky-scraper — rooms which the management of the building generously remodeled especially to suit the needs of the club, and raised by subscription among the members sufficient funds to ensure the expenses for a year ahead. As the budget included items totaling over \$1,200, it was no mean undertaking. The very fact that they were contributing real money to the enterprise appeared to alter the entire attitude of the members, and the committee was given every assistance. New members came in with the change in spirit, and on the twenty-fifth of May, when the new quarters were opened to the public,





WAYNE COUNTY COURTHOUSE  
OTTO H. LINSTEAD





PORTRAIT OF OTTO H. LINSTEAD

WALTER A. LINSTEAD

the membership was greater than it had been at any time in the club's history — every one a live wire, electrified with enthusiasm.

The "house-warming" was a great success, and the club was crowded with guests. Over three hundred visitors were entertained during the evening, several of whom made application for membership on the spot. There was a fine exhibit of prints on the walls, which was the center of attention. The places of honor, the west-wall and the entrance-corridor, were occupied by a large collection of prize and honorable-mention prints kindly lent for the occasion by PHOTO-ERA, and on the north- and east-walls hung examples of the work of members. Something over three hundred prints were shown, selections from which will be found reproduced in this issue.

Of the club-prints, the work of the two Linstead brothers, Otto and Walter, Mr. Herman Gabriel, and Mr. Joseph Mixsell, president of the club, received most attention, though several others pressed them hard.

Since the opening there have been other exhibitions at the club, including one from the Toledo Camera Club, one from the Pinkham and Smith Company, of Boston — makers of the "Semi-Achromatic" Lens — which contained several fine prints by that master of technique, John W. Gillies, and, most recently, two very excellent collections by the courtesy of the editor of *American Photography*. Other collections have been promised, and great interest has been shown both by members and the public.

A number of lectures, lantern-slide displays, club outings and other entertainments have been





THE SENTINELS

HERMAN GABRIEL

arranged, and the prospects are for a busy summer-season in the club. It is to hold a big competition in the autumn, which, like all entertainments of the club, will be open to the public. This competition will be announced at a later date.

The new quarters of the club, in the Kresge Building, are on the fifth floor, and include three rooms. There is a large, well-arranged dark-room, equipped with an Eastman enlarging-camera, taking negatives up to 8 x 10, and many other convenient appliances have been installed. Another room of equal size is used for mounting prints, and for other work not requiring darkness, where are lockers in which to keep supplies. It is also used as the secretary's office, and contains sufficient storage-space for extra chairs, etc. The gallery, which is by far the biggest room,

looks out on Grand Circus Park, than which a more charming view could scarcely be imagined in a down-town location. The walls are in light and dark gray burlap, for the hanging of prints, and the woodwork is dark mahogany finish. The furniture of this room, the pride of the club, consists of a handsome library-table, four deep, comfortable armchairs, upholstered in Spanish leather, and a dozen or so straight-back chairs in pattern to match. All are in quartered oak, finished silver gray. In addition to the pieces owned by the club, one of the members has given the use indefinitely of a large flat-top oak desk and two oak bookcases, which will be refinished to conform to the color-scheme. In this room is kept the club-library — small as yet, but growing — and the current photographic magazines. It is well lighted, and is used not only for club-meet-



GOING TO CHURCH, VOSS, NORWAY

HELEN E. CAREY

ings and entertainments, but as a portrait-studio, for which purpose a background and studio-stand are provided, and kept in the mounting-room, out of sight, when not in use. If equipment goes for anything, the club should be a great success, and it is to be hoped that every earnest worker in Detroit will find it to his advantage to become a member.

There are "club-nights" each week, usually on Monday night, and there is some one there nearly all the time in the evenings to admit visitors. Any one who is interested in photography, either from an artistic or from a technical standpoint, will meet a cordial welcome, and is at liberty to drop in at any time. Members of out-of-town clubs may obtain the privileges of the Camera Club of Detroit during their stay in the city, on application to the secretary. They should bring

letters from their home-clubs identifying them, and are urged to do so.

Clubs desirous to exchange collections of prints are invited to communicate with the secretary, 513-515 Kresge Building, Detroit. The work of preparing a new collection for this purpose is now in progress, and will soon be ready to lend to any camera club that will reciprocate.

Excepting in a few scattered instances none of the members has ever exhibited his work outside of Detroit; but it is now the members' intention to do so, not with the expectation to equal at once the best work of other clubs, but in the spirit of wholesome competition and good-fellowship, in the hope of helpful criticism from others, and with the sense of contributing in that way some small share in the work of keeping alive interest in the photographer's art.



# A Talk on Composition

THE WALRUS



HERE is only one thing that attracts me to this topic — composition — and that is my profound ignorance of the whole business from beginning to end. In this I am by no means alone. I have heard experts (ha! ha!) hold forth with the most sublime confidence on the laws of pictorial composition, and complete novices have subsequently arisen and tied those experts into as many knots as a boa constrictor with convulsions. It is only in recent times that this bogey of composition has been raised. We are taught to fall flat down and rub our faces in the dust before the pictorial productions of the Old Masters; yet those funny old jossers never heard the word composition, or had the least inkling of the existence of any such monster. It would be just as sensible to accuse them of a knowledge of perspective. In fact, I believe that all the modern rules of composition, drawing and color have been evolved by seeing what the Ancient Bosses did, and then making laws to a diametrically opposite effect.

This has had the result of taking all the fun out of pictorial art. The Egyptian artists invariably put a front-view eye in a side-view face. It may have been anatomically incorrect, but it was startling. It raised their portraits above the commonplace. Many of the Saxon and medieval drawings, done in all seriousness, are enough to upset even Newton's gravity. Some of the pictures of deadly combats are funny enough to shake the ribs out of a frozen winkle. There are pictures in the National Gallery beside which the drawings of Phil May, George Belcher, Lawson Wood and Captain Bairnsfather have the deadly solemnity of the illustrations to the propositions of Mr. Euclid. The laws of composition are no doubt highly moral and respectable; but they have messed up picture-making.

It is impossible to fix upon any single person the ignominy of having drawn up these laws, or we might comfort ourselves by erecting a statue to him and writing rude remarks about him all over it. But every artist and every critic takes a hand at this wretched business of thinking out new rules, worse than all former ones, and the more depraved the artist, or the critic, the more laws he lays down. When at least one person has made a composition law, it holds good. The others never dispute it, but only make new ones. Every single rule is contradicted by another one, but they are both valid rules, all the same.

Pyramidal, or triangular, composition is one of the most popular forms. The principal object, or group of objects, takes the form of a triangle. But this is simplified by the fact that the triangle may have any number of sides, and they may be straight or curved, and the triangle may stand on any one or more or no sides, and be every-which-way up it likes. These modifications have been artfully introduced by photographers themselves, because they thereby bring practically all of their compositions into the triangular category, and they know that there is no likelier method of securing the blessings of the critics. If you can persuade a critic that you have based your work on the triangle, he is generally knocked dumb.

There is also much virtue in the wedge. If you find a critic preparing to flay you on the score of two ugly converging lines in your picture, you hurry up and get ahead of him. You point out that by making reasonable concessions, and using a fair amount of imagination, the two lines may fairly be regarded as partaking, to some extent, of the character of a modified wedge; and you will find that you have smitten him upon the hip, drawn his sting, taken the wind out of his sails, stolen his thunder, cooked his goose and, generally, converted him into sausage meat. He knows that it is more than his critical reputation is worth to say anything disrespectful of the wedge.

Circular, or round, composition resembles the triangular and the wedge varieties in those points in which it is like them. As far as composition is concerned, the triangle and the circle are indistinguishable. All the terms are used in a critical or compositious sense. This makes a deal of difference and provides useful loopholes. If a critic asks you point-blank what is the basis of your composition, it is only fair and courteous to tell him; but if you say that the triangle has been your lodestar, and he says that it looks more like the circle, you can easily split the difference and knock in the wedge. That saves the situation.

The photographer must also be prepared to defend his manifold faults. It is easily done. If a glaring error is pointed out by the gloating ghoul of a critic, the photographer must sturdily declare that he deliberately introduced it for the sake of balance, repetition, contrast, symmetry or variety. Of course, he does not say all these at once. He picks out one — any one — and sticks to it. If his argument is not successful, he asks

what would otherwise have become of his pyramidal composition, and the critic folds up.

It is unfortunate that the favorite and commonest form of photographic composition is one that does not appeal to the critics. It has various names, all of which give a more or less clear idea of its pronounced characteristics. Some of them are: spotted dog, confetti in a thunder-

storm, spingle-spangle, all-over-the-shop, plumduff, shrapnel, spotted fever, fidgetty Fanny, currant-roll and shingles. You see at once the sort of thing I mean, and you must admit that the vast majority of photographers must plead guilty. The only possible chance of salvation is to make desperate efforts to work in the triangle.

*Photography and Focus.*



CANAL AND TREE

P. S. CLEVELAND





PEACE IN YORKSHIRE

PHILIP M. C. ARMSTRONG

# Two Neglected Processes of Reduction and Intensification

C. WELBORNE PIPER



HERE are practically only two reducers in common use — Farmer's reducer and persulphate — and as the former in nearly all cases produces an extra amount of reduction in the shadows, which is not always desirable, while the latter is somewhat erratic in its behavior, reduction is generally looked upon as an unsatisfactory proceeding, to be avoided whenever possible. It is undoubtedly quite easy to spoil a negative by either of these two methods, and, however much experience we may have in their application, very few will care to incur the risk of applying them to a really valuable negative. Some years ago Dr. Eder introduced another method especially for the purpose of reducing the intensity of the highlights without affecting the rest of the negative. This process was carried out by first bleaching the negative image to one of silver chloride or bromide, then re-developing the result, but stopping the re-development short just before the highlights were developed right through to the glass. A fixing-bath then removed the remaining undeveloped silver salt, leaving the highlights thinner than they were before. The final result was, therefore, similar to that produced by persulphate when that compound works as it is supposed to do. But erratic as persulphate can be, it is reliability itself compared with the other process, which depends entirely upon stopping development at the particular right moment. If we are a little too late, the highlights speedily attain their former density; whereas, if a little too soon, they will often fail to attain the density of some of the lower tones, so that an effect of reversal is obtained. It may be noted here that it is very doubtful whether a reducer that has a greater proportionate effect upon the lights than upon the shadows of a negative is really of any value. In most cases one that acts proportionately throughout the whole range of gradation will serve just as well, and the few cases in which it will not serve must be due to underexposure, which is essentially a defect that permits no remedy. There must always be a certain amount of risk attending the use of a reducer that acts preferentially in different parts of the film; whereas one that acts proportionately throughout cannot very well spoil the negative. If carried a little too far, the gradation is still preserved, and the only

effect is general thinness, not the total destruction or reversal of gradation at one or other end of the scale. Fortunately, Eder's process is capable of modification that converts it into a reducing-method of this type, and this improved method is one of the safest and most reliable processes possible.

## Reduction by Re-Development

In Eder's original method, as described, everything depends on stopping development at the right moment before it has gone too far. In the modified process we depend solely on the use of a developer that is incapable of developing the image up to its former density. Nothing is left to personal judgment save the making-up of the developer, and this is made up on quite simple principles: The following is the method I first adopted: Bleach the negative in the ordinary ferricyanide and bromide bleacher used for sulphide-toning. It is necessary to use a bromide bleacher; but in these days, when bromide is so expensive, we can economize by keeping the bromide down to one-third the amount of ferricyanide. Five grains of bromide and fifteen of ferricyanide in each ounce of solution are quite enough, and more bromide is not only extravagant but unnecessary.

Wash the bleached plate and then re-develop with a solution containing 2 percent Rodinal and 1 percent potassium bromide. The formula is:

Rodinal.....	100	minims
Potassium bromide .....	50	grains
Water.....	10	ounces

With this developer working at a temperature of 55° F., in half an hour the negative will be re-developed to a density equaling about 60 percent of its original density, the change being nearly proportional throughout. A fixing-bath removes the undeveloped silver salt, and a washing completes the process.

Rodinal was the re-developer first employed; but in point of fact any kind of developer can be used for the purpose. A glance at the old formula will show what kind of modification is required for our special purpose. Two-percent Rodinal is obviously a weak tank-developer adapted to prolonged development, whereas the addition of 1 percent bromide converts it into a highly restrained slow tank-developer.





*Copyright, 1915, F. A. Walter*

VANITIE BEATING TO WINDWARD  
F. A. WALTER



A suitable developer for reduction-purposes will therefore be any very dilute and slow-acting tank-developing formula containing up to 5 grains bromide per ounce.

If the original negative is not excessively dense we can use less bromide, and it is convenient to do so, as otherwise the time of development will be greatly prolonged. The formula given is adapted to negatives of excessive density, and as weaker ones will not require so much as 40 percent reduction, we must either reduce the bromide or prolong the time of development. A very convenient substitute for the Rodinal is Azol, which works just as well and can be used in the same strength.

The progress of development can, of course, be watched, and if the negative is examined from time to time it is easy to avoid either stopping too soon or too late. If we err in either direction the negative is by no means spoilt. Neither detail nor gradation is lost, and the only result in the one case is a rather thin negative and in the other one that it is still slightly too dense.

#### The Mercury Physical Intensifier

A few years ago Messrs. Lumière, in an article on the development of plates that had been fixed before development, gave formulæ for both silver and mercury physical developers that were efficient for the purpose. It is obvious that a physical developer capable of building up a printable image on a fixed-out plate should be eminently useful as an intensifier on an ordinary negative; therefore it seemed to me worth while to experiment with the new mercury formula. The silver intensifier is, of course, well known, and so also are the objections to its use on gelatine plates. It is capable of most excellent results; but we cannot rely upon it exactly, owing to its habit of depositing silver in the wrong place, unless a preliminary clearing-bath is used, as in Mr. J. B. B. Wellington's process. The mercury formula has no such objectionable features. On the contrary, it is a wonderfully clean intensifier, showing no tendency whatever to deposit mercury on the gelatine, or anywhere on the film other than the image. It is, however, slower in action than silver — too slow, perhaps, to suit commercial workers. For certain purposes, however, it is a most valuable intensifier, in spite of its slowness; for while it can build up an almost unlimited amount of density, it will do so without disturbing definition or clogging up fine, transparent lines. This is, of course, the peculiar feature of physical intensifiers that gives them a special value; and while this value is discounted in the case of the silver intensifier by the trouble it gives and the dirt it deposits,

by using the mercury formulæ we can take full advantage of it.

The original formula is as follows:

A		
Water .....	1,000 ccs.	10 ounces
Sodium sulphite (anhydrous) .....	180 grams	15 drams
Mercury bromide .....	9 grams	40 grains
B		
Water .....	1,000 ccs.	10 ounces
Sodium sulphite (anhydrous) .....	20 grams	90 grains
Metol .....	20 grams	90 grains

For use, add one part of B to five parts of A.

The mixed solution is simply applied to the plate and allowed to act until sufficient effect is produced. An hour's action is sufficient in most cases; but the plate can safely be left in the solution all night if a very strong effect is desired.

It will be noticed that the formula contains two ingredients that now are rather difficult to get, if not unobtainable. The intensifier is, however, more suited to the work of the scientific investigator than to that of the ordinary photographer, and as there are probably few laboratories that do not contain both mercury bromide and metol in some small quantities, this objection is not very serious. I have made various attempts to substitute pyro for the metol, but without getting any good results; but possibly some developer other than metol can be made to serve. The bromide compound of mercury seems to be, and probably is, essential; mercuric chloride cannot apparently be substituted for it.

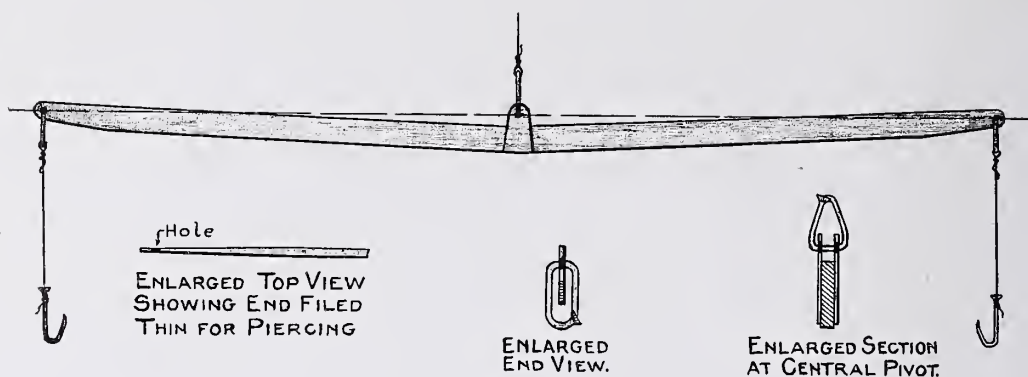
Two special branches of work for which this intensifier should be eminently useful are photomicrography and spectrum photography, in both of which the intensification of fine detail without damage to definition or structure is sometimes of great importance. The general effect of this intensifier on gradation seems to be peculiar, in that it tends to intensify low tones to a greater extent than the deeper tones. In one test the increase in density varied from 8 and 5 times in the underexposure curve to 3 times and twice in the lower and upper parts of the straight line. It thus seems to tend to bring up fine shadow-details without over-intensifying the lights, which effect at times is a very valuable one. The test referred to is, however, an isolated one, and it does not follow that the same peculiar effect will be produced in all cases.

*The British Journal of Photography.*



THE question is not, will men honor you for your work? But, does your work honor you? Your concern is not only to create profit for yourself but to make that which will profit many besides yourself.—*Ozora S. Davis.*





## A Weighing-Scale for the Amateur

EARL STAFFORD



WHEN the amateur photographer does his own developing it is not long before he becomes dissatisfied with the ready-mixed chemicals and preparations that are on the market. If he reads the periodicals and books dealing with picture-making he wants to try the formulas and methods which are described. A photographic balance or scale which is accurate enough to weigh the relatively small quantities of chemicals for amateur work costs from three to five dollars, and is not always satisfactory.

It is not difficult to make a balance that will meet all requirements. A few hours' work will produce a scale which will weigh any quantity from a fraction of a grain up to an ounce or more. It consists primarily of a bar or beam having three suspension-points in line, one of which is half way between the other two. When the bar is suspended by its center-point, and pans or containers are hung from points at the ends, anything may be weighed by putting an equal known weight on one side, and adding the material to be weighed to the other side, until there is a balance and the bar remains in a horizontal position.

The writer will describe the making of a simple balance that was made some time ago and has always given satisfaction.

The beam should be a strip of stiff brass, twelve or fourteen inches long, about a quarter of an inch wide and a sixteenth of an inch thick. Exact dimensions are not important as long as the piece is not heavy; lightness combined with stiffness will give the greatest sensitiveness. The center suspension-point may be made by soldering two very thin pieces of brass or other metal to the bar, as shown in the sketch. Each piece

should have a hole made by driving a coarse needle lightly into the metal and filing off the dent made on the opposite side. By working alternately from each side a smooth, round hole can be made.

When the pieces are soldered in place, thus establishing the center hole, the ends of the bar should be filed thin, to allow punching the end holes with a needle. These should be carefully located, to ensure equal spacing. When all three holes have been made, the bar should be bent until they are exactly in line. This will be shown by stretching a long hair across the holes, or by the use of a straight-edge. If, upon measuring the distances between the holes again, there is any difference, the short end of the bar may be lengthened by striking it here and there with a hammer. If the beam does not hang exactly horizontally when suspended at the center, the low side should be filed off to lighten it.

Common pins bent as shown will make suitable pivots. They should be perfectly smooth and evenly bent, and should fit loosely in the holes, which should also be smooth. Upon this point, and upon its lightness, depends the sensitiveness of the balance. The suspension-pieces should be linen or strong silk thread, and those at the ends should terminate in hooks to hold the pans.

Pans of paper have several advantages over the metal pans ordinarily used. There is no corrosion from the chemicals, and a new pan may be made each time, to prevent any mixing with particles of materials left from previous use. The illustration shows a pan which can be made in a few seconds by folding a square of paper. When two squares of equal size are used the pans will

be of equal weight, and no further adjustment of the balance will be necessary.

Undoubtedly the metric system of weights is more suitable for the photographer, but weights are so easily made one may have them for both the English and metric systems.

Copper wire is best for making grain weights. A piece of No. 16 wire  $\frac{7}{32}$ " long weighs just a grain;  $\frac{7}{16}$ ", two grains;  $\frac{3}{8}$ ", three grains;  $1\frac{3}{32}$ ", five grains;  $2\frac{3}{16}$ ", ten grains;  $3\frac{3}{8}$ ", one gram, or 15.4 grains. For size No. 14 wire the corresponding dimensions would be  $\frac{1}{8}$ ",  $\frac{9}{32}$ ",  $\frac{7}{16}$ ",  $\frac{11}{16}$ ",  $1\frac{3}{8}$ ", and  $2\frac{1}{8}$ ".

For making gram or ounce weights, thin sheet copper is convenient. No. 28 gauge copper plate is .0126" thick, and a piece  $\frac{3}{4}$ " square weighs one gram. Two, three, five and ten grams can be made by keeping the same width and multiplying the length of  $\frac{3}{4}$ " by the number required. A strip  $11\frac{7}{16}$ " long weighs one ounce avoirdupois, or 15.4 grams.

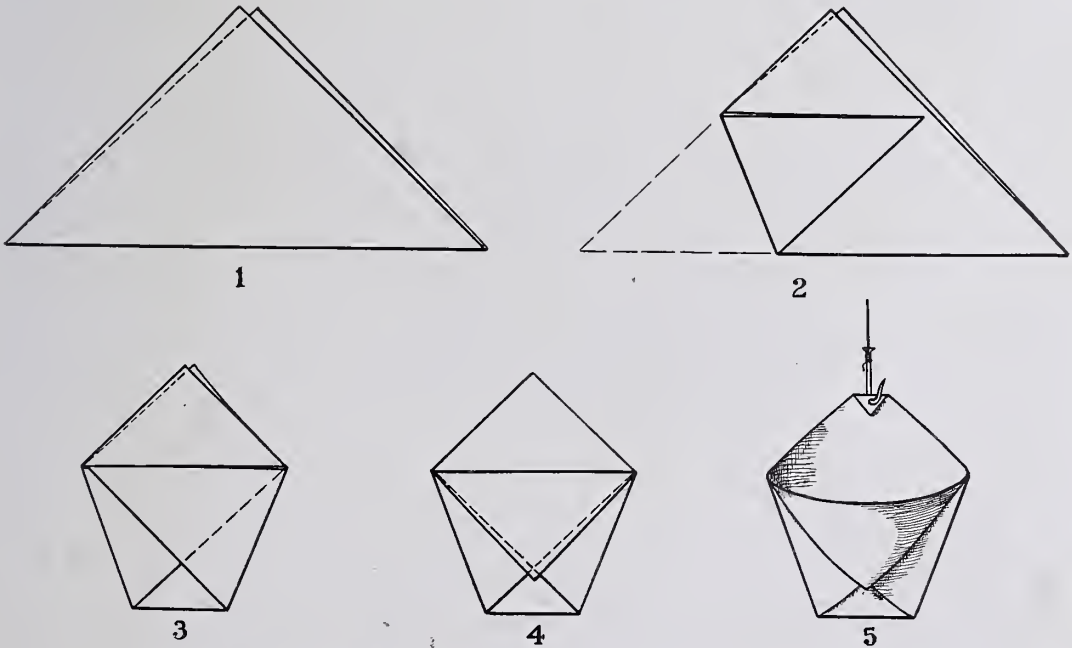
These pieces may be cut out with scissors, and filed down, if necessary, to exact areas indicated by measurements scratched upon them with a knife-blade. When the strips are rolled they make neat and compact weights. Copper wire and plates may be bought from a good hardware-store. Brass is equally good for making weights, but if it is used the lengths of all pieces should be increased about six percent. It is well to have the material measured by the dealer, to make sure

the diameter and thickness are correct. A different thickness of plate may be used and the equivalent areas found by proportion — half the thickness requiring twice the length, etc.

New coins are useful for testing the accuracy of the weights. Pennies weigh 48 grains or 3.1 grams; nickels, 77 grains or 5 grams; dimes, 38.6 grains or 2.5 grams; and quarters, 96.5 grains or 6.25 grams. In testing, 2 grams and 8 grains should balance a dime, for instance. If these do not balance, the 2-gram weights should be filed off a little until they just balance each other, and when combined with 8 grains will balance a dime. In this way, by making different combinations, any degree of accuracy may be obtained.

This scale, when suspended from a hook or nail over the work-table, will fulfil every need for accuracy and capacity. In fact, if the chemical to be weighed is coarse or granular it will be found sometimes that it is difficult to add or take away a small enough quantity to make the bar hang exactly horizontally.

THOUGH failure in the use of draped figures may result in mere inadequacy of expression, failure with a nude figure becomes positively offensive. It is necessary to introduce mystery to a great degree when using a figure-model.—PAUL LEWIS ANDERSON, in *Pictorial Landscape-Photography*.



DIRECTIONS FOR FOLDING THE SCALE PAN.



# One-Lens Stereoscopic Photography

E. L. AUSTEN



**I**CANNOT understand why amateur photographers do not take more interest in one-lens stereoscopic photography. It is seldom that one sees anything about it. Because of this last fact, and because I have gained so much pleasure myself from it, I shall try to describe some of my own experiments therein. I suppose the reason why it is not more popular is because its possibilities are limited to stationary subjects; but this does not prevent its being a very interesting branch of amateur photography. For the average person (as distinct from the artist) I fancy that nothing can approach a colored stereograph in realism of effect.

It is understood, in the first place, of course, that the effect of relief seen in a stereograph, when viewed through the stereoscope, is due to the fact that the two images were made from slightly different viewpoints. In a stereoscopic camera this difference is obtained by separating the two lenses three inches; but, an ordinary camera having but one lens, it is necessary to move the instrument itself, between exposures, in order to obtain the required difference in the points of view. Special tripod-heads can be used for this purpose; they are excellent for everything except distant subjects. For these, and also for very close work, better results will be possible by giving a greater or lesser separation than is given by the stereoscopic head. The possibility of varying the stereoscopic effect at will is the only superior feature an ordinary camera has over a stereo-camera. In making distant views, if the lenses be separated only three inches, the effect of relief is not sufficiently marked in the middle-distance and extreme distance. By moving the one-lens instrument as much, perhaps, as 12 feet (for most persons) a very pleasing exaggeration of relief is given. In such a picture, every detail, even 1,000 feet away, stands out clearly; it gives one the feeling of viewing a toy world. Of course, such an effect is not strictly realistic, but it is an exaggeration of realism and undeniably pleasing. On the other hand, when the subject is less than 4 or 5 feet away, the regular separation of 3 inches is too much. I have looked in vain for a scale which would give the proper distance to move the camera between exposures, according to the subject's distance from the lens. The following scale, I think, will be found approximately correct. Only approximately, however, because in order to get an abso-

lutely accurate scale scores of systematic experiments would be necessary. This scale may be found to give slightly too little, or too much, relief for some of the distances.

*Distance of nearest object from lens*

18 inches  
2 feet  
3 feet  
4 feet  
6 feet  
8 feet

*Distance to move camera between exposures*

$\frac{3}{4}$  inch  
1 inch  
 $1\frac{1}{2}$  inches  
2 inches  
 $2\frac{3}{4}$  inches  
3 inches

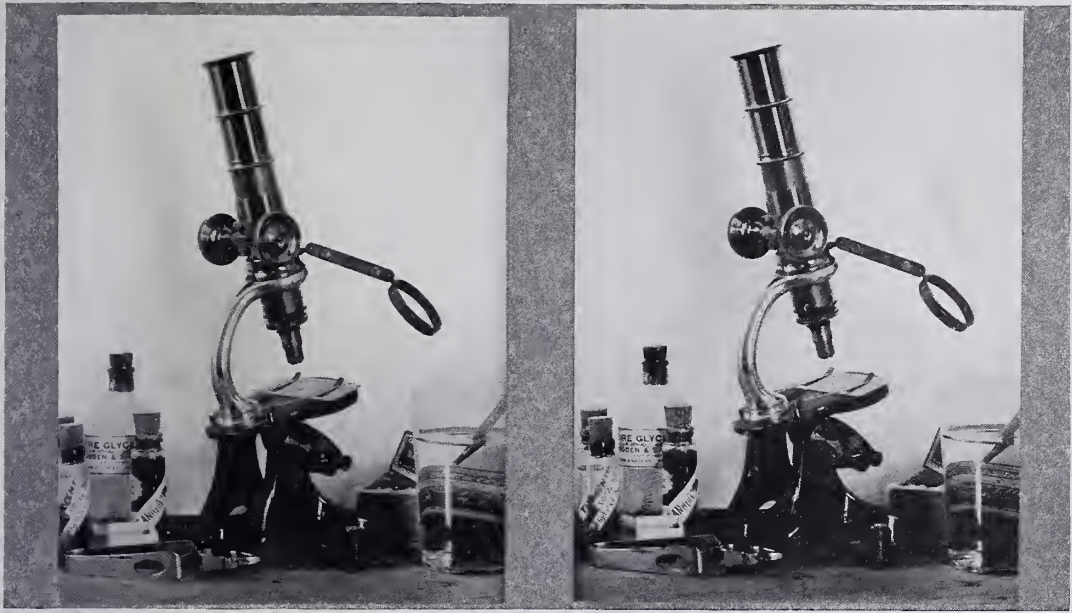
From 8 to 50 feet use the stereoscopic tripod-head.

50 feet  
100 feet  
500 feet upwards

5 to 6 inches  
1 to 6 feet  
6 to 15 feet

Of course, the higher up one gets in the scale, the less becomes the need for accuracy — as may be seen by a glance at the scale. At 50 feet one may use the tripod-head, which gives a separation of but 3 inches, or one may move the camera as much as 6 inches. More stereoscopic effect will be obtained if the latter be done.

In taking a distant view with an ordinary camera, for instance, several points must be remembered. When the sun is shining, especially when it is low, it is important — after taking the first picture — to move the camera to the right position for the second picture, and be quick to make the exposure; because, if even two or three minutes elapse between exposures, there is likely to be some difference in the form of the foreground-shadows, so that the two shadows will not coincide properly, when viewed in the stereoscope. *Slight* movement in the middle-distance will not cause enough difference between the two pictures to matter. For instance, human figures can be taken if they remain motionless, and are far enough away from the lens. Clouds cannot be taken unless, perhaps, they are low on the horizon, where their apparent motion is not so great as when they are nearer the zenith. Of course, views cannot be taken when the wind is blowing. When the ground on which the tripod is placed is fairly level, and the camera must be moved quickly, a tripod-brace is very helpful. But if the ground is not level the brace cannot be used; the tripod must be lowered or raised sufficiently to compensate the slope of the ground — the slope from position I to position II, of course; a slope in the direction in which the lens



EXAGGERATED EFFECT  
TRUE EFFECT  
E. L. AUSTEN







LUMBERMEN

C. J. VON DÜHREN

is to point does not affect the result. In establishing this imaginary level line one's eye will be accurate enough. After the first exposure is made, according to the foregoing considerations, move the camera and tripod to position II, open the camera-back (do not touch the focusing-pinion) and point the lens so that nearly the same view is included in picture II as in picture I. This is best done by marking the relative position of two salient objects in both upper corners of the ground-glass, with a lead-pencil, when the first view is about to be made; then, when the camerist is ready to take view III, he has only to make the two objects coincide with his two pencil-marks. Never attempt to move the camera and make the second exposure without first observing whether or not the subject is properly included in the ground-glass. There is another

precaution necessary sometimes: always use the two-way level where possible (I assume the ordinary amateur's camera has one); but if the camera must be tipped up or down, so that both bubbles in the level cannot be centered, still center the bubble in that branch of the level which corresponds to the cross of the "T." All these precautions are necessary so that as little adjusting as possible will have to be done when the prints are mounted to make them coincide. Except in very distant views, if the camera be tilted at different angles sidewise in taking the two pictures, it will be quite impossible to make the prints coincide over their whole surface. Parts, usually one edge or the other, will coincide; but no amount of trimming can correct a badly tilted picture, even though its mate be taken correctly.



THROUGH THE TREES

REXFORD KRUEGER

Exposure and development of the plates are as usual — try to preserve shadow-detail with highlight-detail.

Mounting is a very delicate operation, sometimes, and always tedious. Proceed as follows: Trim both prints to size  $3\frac{1}{8} \times 4$  inches, making the first cut along the mark made by the bottom (or top) of the plateholder on the negative. Be sure, before trimming, that the trimmer's rule is exactly at right angles with the blade. Now lay both prints on a blank card in the stereoscope, and observe them, moving them about slightly till they coincide. They may be so arranged that a "pseudo-scopic" effect is obtained — that is, those objects in the pictures which should be nearest appear to be farthest. If this occurs, of course one has simply to reverse their positions. Having decided which print belongs on the right

and which on the left, mark them on the back accordingly, "R" and "L." When the prints are on the card in their correct relative positions, one should also note whether they coincide correctly. If one print has to be raised slightly in order to effect this, trim the other's bottom margin an equal distance to that which the first print had to be raised. Now lay them down again on the card and see if they coincide so far as equal heights are concerned. If so, they can, leaving a little more on the right-hand edge of the right print than on the left-hand edge of the left print, be trimmed to their final size,  $3 \times 3$  to 4 inches (the height can be suited to the subject at hand), and mounted; unless, of course, it is found that, despite all precautions, one image has been made at a slight tilt. It was because of this possibility that the extra  $\frac{1}{8}$  inch was left on



either print, so that the pictures would not be too narrow when such an amount as will counteract the tilt is trimmed off each. The fact that the two prints were made with the camera tilted sidewise at an angle to the proper level is easily seen; when the right-hand sides of the pictures coincide, the left sides will show two images—and vice versa if the prints be so tilted. Now, if the camera was not tilted much, the fault can be corrected by trimming, as explained above; but if the tilt is excessive no amount of trimming will ever remedy the fault. If reasonable precautions be taken, however, no trouble will be experienced. To show that, in spite of the formidable sound of the foregoing directions, it is not difficult to make one-lens stereoscopic pictures, I might add that it is quite possible to get two usable images by taking two snapshots from the hand, without the use of the tripod or ground-glass at all.

A few words with reference to mounting may be of service. Plain gray Melton board makes a good mount for uncolored prints. Mounts should be 7 inches long and 3 to 4 inches high, accord-

ing to the needs of the picture. Regular stock-mounts can be used, if preferred; but I find it very satisfactory to trim large sheets of Melton board to the particular size desired. Bisect the card with a light pencil-line at right angles to the bottom edge. Draw another pencil-line at about  $\frac{1}{8}$  inch from, and *exactly* parallel to, the bottom of the card. Then paste on the prints, being sure to get "R" and "L" in their correct relative positions, and to place the prints *exactly* along the long pencil-line. It does not matter if there be a small space between the two pictures, but it looks neater to have them touching.

In spite of the fact that only stationary subjects are possible in one-lens stereoscopic photography, there is no lack of subjects. In spring, wild-flowers make excellent stereographs, especially when colored. Then one has, for possibilities, still-life subjects of all sorts—interiors and exteriors; and landscapes, on still days. Indeed, nearly everything that can be taken by the amateur, except speed-pictures and portraits, can be made into stereoscopic subjects. One must choose his time more carefully, that is all.

## Amidol for Plates and Films

DAVID IRELAND



THE very popular developer metol-hydroquinone being no longer available, owing to the shortage of metol, the writer was led to make some experiments in the use of amidol as a developer for plates and films. The results have been so gratifying that other workers will be repaid if they make some trials along the lines indicated.

Amidol, *per se*, has never had much vogue as a developer for negatives, producing as it does a somewhat clogged-up image if development is continued long enough to give sufficient printing-density in the highlights. The method now recommended is to develop with a well-restrained solution to such an extent that the negative after fixation is too thin to print satisfactorily, and the necessary increase of density is obtained by chromium bleaching and redevelopment. The developer is as follows:

Water .....	20 ounces
Sodium sulphite (cryst.) .....	1 ounce
Amidol .....	40 grains
Potassium bromide .....	30 grains

This will keep in good condition for three days. The addition of 6 drams of sodium bisulphite lye extends its life to several months.

The exposed plate is developed in this solution until the image shows quite clearly at the back, considerably more so than would indicate complete development were one using metol-hydroquinone or other developers of a similar type. After fixing and washing, the negative is bleached in:

Water .....	10 ounces
Potassium bichromate .....	50 grains
Hydrochloric acid .....	2 drams

It is next washed in running water fifteen minutes, or until all yellowness has disappeared, and then redeveloped in a fresh portion of the amidol solution used in the first development. This is done by artificial light, not in the darkroom nor in daylight, and after ten minutes' washing the negative may be set up to dry.

Negatives produced in this way appear to have a range of gradation considerably longer than those developed in the ordinary manner, and are suitable for enlarging on bromide paper.

This method of development and redevelopment yields bromide prints of high quality, which, however, must in the first instance be exposed and developed a little short of the usual in order to allow for the increase of density given by the bichromate bath.

*The Amateur Photographer.*

# Darkrooms — Dire and Delightful

W. R. BRADFORD



LIKE the rest of the camera-tribe, my first darkroom was a bathroom. You know yourself that this does n't last long. The different acids, potashes and other pestiferous compounds we use soon cause gangrene of the bathtub. Then, like the sidewalk-loafer, it's — "Move on!"

Only two moves remain — a divorce or the basement. Ha! to the basement then be it. Outside of breaking a quart bottle full of permanganate of potash solution on the tiled floor of the bathroom, the moving was highly successful. "Now," said I, *a la* Monte Cristo, "the basement is mine!"

Fool that I was! I soon longed for the bathroom-darkroom again.

There, at least, I was pestered only by the members of my own family. The basement proposition was worse than a free festival in a colored church. Everybody wanted to get in. Sometimes all at once, other times one by one. Washerwomen, plumbers, furnace-repair men, electricians, old rag and bone men, yes — and white-washers! Who in the name of humanity would want a darkroom whitewashed? One has no idea of the wants of humanity until he opens up a basement-darkroom! It is a phase of weak humanity to want to "bulge in" past a "no admittance" sign.

I'd no sooner get a 10 x 12 piece of Linen Cyko paper tacked on the enlarging-easel than everybody in the state of Pennsylvania would pound on the basement door, all howling like starved hounds: "Open this door!" "I want my bicycle!" "Is my football down there?" They wanted rakes, baseball-bats, jars of jam, garden-hose, clothes-props and everything that a well-cluttered basement contains. Small boys found the ruby-glass in the window-shutter a fine thing to peg stones at.

(Poor old Job had a time-table telling the

arrival and departure of boils.) My program of inflictions was as follows:

Monday. Washday. The laundry-tubs being over my basement-darkroom, I could always expect a deluge of bluing-water or hot soap-suds whenever the washerwoman found it convenient to upset the washboiler or do some other Niagara Falls stunt. (I finally baffled her attempts somewhat by the use of umbrellas.)

Tuesday. Ironing-day. The thumps of twelve-pound flatirons, used two at a time by a 300-pound burnt-umbered Amazon, vibrated the house like a powder-mill exploded by the "hyphenators." Tuneful fragments of camp-meeting songs and shuffling of ham-like feet accompanied the thumpings.

Wednesday. Ash-day. (Ashes here in Philadelphia are poked out of a 6½ x 8½ Tom Thumb window in strawberry-boxes and such.) Basement like a flour-mill on a windy day! Ten thousand pinholes waiting for every negative!

Then, in the absence of other annoyances, the next-door neighbor would wash out four box-car loads of rag-carpet and hang it all on the iron picket-fence, where it would cast a Stygian shadow on the reflector-board of my daylight-enlarging-contraption. Swear? At that time, I could outswear the tarriest bucko mate in the old "Lime juicer" days.



GANGRENE OF THE BATHTUB





DARKROOM-WORK ON WASHDAY

Were the family out every peddler in Philadelphia would take turns to see who could push the bell-button in the farthest.

"That cough," said the doctor, "is never going to get any better in a basement!"

I moved my camera-junk to the room on the second floor that I used for a studio. There is no running water in the room, but I manage to get along without it, as I will explain later. The first thing I did was to build a cabinet to hold my truck. It's already jammed to the guards, and each pay-day I bring home more stuff. Oh, where will I put it? There may be amateurs richer in jugs and bottles than I am, but I have my doubts. I next put up an extra-heavy opaque roller-shade at each window, making two at each window. The shutter, fitted to the lower half of the "sunny side" window, with a focusing-cloth over the upper half, makes a light-tight window when the two shades are pulled down.

I go into action as follows: I carry a bucket

and a pitcher full of water, lay a sheet of oil-cloth over my desk. Then up goes the window-shutter with the camera. The enlarging-easel follows. Pull down the shades and *lock the door!* In a 10 x 12 tray I pour an ounce and a half of acetic acid and 32 ounces of water. That's for rinsing prints or negatives; the bucket of water furnishes a place to rinse hands.

I can clear the deck, so to speak, in about ten minutes. I use a tank for developing nearly all my plates. For illumination by daylight, three yellow Virida papers, passepartouted between 8 x 10 plain glasses, furnish a splendid volume of safe light for bromide and gaslight paper. The addition of a sheet of ruby-glass provides "safety first" for any plate, up to panchromatics. For these plates and for night illumination, I have an electric lantern, in which, by removing the glass over the reflector, I insert three circles of Yellow Virida paper and two of Green Virida paper. If I work in daylight, I cover the light in my window-shutter board, and the electric lamp then furnishes a safe light to handle the much-dreaded panchromatic plates, which, if not looked at, poked and jiggled every two minutes, are as easy to handle as a roll of film in a film-tank.

I hope that I have made myself clear in my attempt to show that an elaborate darkroom with hot and cold water spigots is not necessary. True, at times your substitute darkroom will



THE WORKROOM RESEMBLES A 5 AND 10 CENT STORE STRUCK BY LIGHTNING

look like a 5 and 10 cent store struck by lightning. At those times keep your wife out, as it might make her excited or discouraged — so to speak. Still, if the worst comes to the worst, a pair of silk stockings or a box of candy will cover a multitude of objections. I'm simply passing on my experiences to those who would like to know "how-to-make-successful-pictures-in-a-bedroom!" It can be done, and furthermore it will teach you order and cleanliness, as you for any considerable length of time will have to be neat, otherwise it will take more than silk stockings and candy to square you with the "powers-that-be."

Personally, had I no other place, I would even turn a folding-bed into a darkroom, and, on a pinch, would construct an enlarging-camera out of a rubber-boot, rather than give up my beloved vice of photography. Cholera can be cured, but the camera-bug is a hard-dying germ. Long may it live!

### A Recapitulation of Pictorial Landscape-Photography

In the first place, it was found that the fundamental purpose of that branch of landscape-photography which can be classed as fine art is the arousing of some sentiment or emotion in the observer, and that the deeper emotions are the quieter ones. It was also found that these emotions are best aroused by prints which represent quiet

scenes, especially those of evening, for brilliant sunlight and extreme darkness are less impressive than the effect of late afternoon, when the light has begun to fail but still retains strength enough to show a certain amount of detail in the deep shadows.

Such effects are rendered best on an orthochromatic or panchromatic plate, and developed for only a moderate degree of contrast.

Due attention must be paid to composition of line, and this is more necessary to the photographer than to the painter, for the latter has the element of color to aid his arrangement, so that monochrome reproductions of the work of great painters are not necessarily good guides for the photographer.

Good technique is of the greatest importance; but undue attention to technique will result in loss of imaginative quality, and this is far more important than technical excellence, as a picture may be great without the latter, but can never be so without the former.

Finally, it may be added that no one can hope to attain preëminence in landscape-photography without much hard work and study; but no one should be discouraged by this fact from attempting it, for, even if he fail to reach the highest possible point, he will find that the pursuit affords him, and perhaps his friends, great pleasure, together with a not inconsiderable amount of physical benefit.— PAUL LEWIS ANDERSON, in *Pictorial Landscape-Photography*.

Oh! There's Pyro in the coffee and there's Hypo in the jam,  
When Father does photography he doesn't give a—deuce.  
Pyro-stains on all the towels—flash-powder on the cat,  
He'll have to give this business up and that's the end of that!



THE FAMILY-CHORUS





AT THE WELL  
FIRST PRIZE — MISCELLANEOUS  
JOSEPH B. KAHILL





# EDITORIAL



## The Illumination of White Objects

THE matter of illumination in portraiture — the distribution of the light, with its contrasts and gradations, that yields what is commonly known as modeling, and which expresses the character of the sitter — is an important study. Indeed, his control of the light may be regarded as the artist's most powerful agent.

But it is a certain phase of this subject, viz., the treatment of objects in a high key — their judicious use and artistic modification — that is here presented for consideration. Most artist-photographers are accustomed to subdue the obtrusive character of white or light-colored features in the costume of a sitter, or any harsh note in a quiet or dignified composition. Here, shades and screens aid materially in adapting such features to the harmonious scheme of the artist, who, in extreme cases, may resort to after-work on the negative — local reduction. If the offending object, be it a white handkerchief, bandeau or hair-ribbon, can be replaced temporarily by one in a low tone, without embarrassment or delay, so much the better. An enterprising Boston photographer keeps on hand an assortment of hair-ribbons of different colors and shades to meet contingencies of this kind.

In landscape-photography the case is somewhat different, as the only remedy lies in after-correction, unless a change in costume or accessories can be effected before the exposure is made. A figure arrayed in white does not usually harmonize with a setting in a low key, although pleasing in the ordinary sense. A model in a dark costume does not need to wear a white hat, or white gloves or shoes, nor to carry a light-colored parasol or other object likely to disturb a low-toned composition. In many cases it may be arranged that the models attire themselves in suitable costumes beforehand. Nevertheless, a figure may appear incongruous against a background of green foliage or dark rocks and yet harmonize with a light sandy beach. Here the direction of the sun plays an important part, and will assist the photographer in developing his scheme of light and shade — behind the figure to lower the tone, and in front, or obliquely, to give brilliancy.

An admirable result of photographing a figure attired in white and posed somewhat against the

sun is the charming seashore-portrait, by Henry H. Blank, published in PHOTO-ERA, November, 1914. The face and arms of the young woman, also most of the costume, are in shadow, with which the strongly lighted hat and parts of the dress form a pleasing contrast. The background is a broad expanse of water, and the happy scheme of lighting has produced a picture that is animated and harmonious. In the same issue is a group of two young women dressed entirely in white and posed in the open. The evening-sun, coming from the left and through a hazy atmosphere, casts a soft light over the group, yet with sufficient force to produce beautiful modeling throughout. The "Al Fresco Breakfast," by A. Gottheil, in the issue of February, 1915, is another superb example of judicious lighting. Here, however, the single figure, in a near-white costume, and the breakfast-table, with its white tablecloth and dishes, are partly shaded by the foliage overhead, and touched by the rays of an early sun. The whole picture is filled with delicate contrasts, and there is sparkle without one discordant note.

A common fault is the wrong way in which the light-masses are distributed in an open-air composition. Thus, a waterfall may be photographed when in complete shadow, while the setting appears in full sunlight. The result is a sort of pictorial anticlimax — the reverse of what logically should be done. The success of a landscape-composition often depends upon the direction of the sun. Many a promising picture has been marred because it lacked artistic balance of light and shade, the sun striking prominent objects on the wrong side. It is a good plan to study the subject for a pictorial composition, from the same viewpoint, at different hours of the day, and to observe the effects of light and shade. It will be found that in some instances the artistic effect is good, and in others bad.

As has been explained already, a white figure that appears photographically incongruous in a landscape can be made to suit the needs of the worker who needs but to utilize the most favorable light-conditions. The same is true whether the troublesome object be a house, a monument, or a tree or bush covered with white blossoms. Photographed even for their own sake, such objects in white or a very light color look better when photographed as suggested.





# ADVANCED COMPETITION



Closing the last day of every month  
Address all prints to PHOTO-ERA, Monthly Competition  
383 Boylston Street, Boston, U. S. A.

## Prizes

*First Prize:* Value \$10.00.

*Second Prize:* Value \$5.00.

*Third Prize:* Value \$2.50.

*Honorable Mention:* Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.

## Rules

1. This competition is free and open to any camerist desiring to enter.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. **Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.** Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P. or black-and-white paper having the same gradations and detail.

3. *Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name, address, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what competition it is intended.*

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with *double thicknesses of stiff corrugated board, not the flexible kind, or with thin wood-veneer.* Large packages may be sent by express very cheaply and with indemnity against loss.

7. The prints winning prizes or Honorable Mention in the twelve successive competitions of every year constitute a circulating collection which will be sent for public exhibition to camera-clubs, art-clubs and educational institutions throughout the country. The only charge is prepayment of expressage to the next destination on the route-list. This collection is every year of rare beauty and exceptional educational value.

## Quarterly Miscellaneous Competitions

In order to extend the opportunities for participation by a larger number of our readers, and to broaden the scope of the entries, these will be a feature of 1917.

## Awards — Miscellaneous

Closed May 31, 1916

*First Prize:* Joseph B. Kahill.

*Second Prize:* W. T. Starr.

*Third Prize:* William S. Davis.

*Honorable Mention:* Charles P. Abs, James C. Baker, Lawrence Baker, Alec Blackie, John Paul Edwards, A. B. Hargett, F. W. Hill, T. W. Kilmer, M.D., George Krause, Mrs. Wilma B. McDevitt, Alexander Murray, G. H. Najarian, W. E. Owen, W. J. Schubert, Dr. F. F. Sornberger, Wm. H. Spiller, W. T. Wright.

Special commendation is due the following workers for meritorious prints: Albert W. Ayre, Jacob Boss-hart, Allen F. Brewer, Paul W. Bufler, C. H. Campbell, Henry F. Davenport, Kenneth Dows, Kay R. Duce, J. F. Eden, J. H. Field, Anson M. Holcomb, Franklin I. Jordan, Geo. P. Lilly, T. W. Lindsell, William L. Patten, E. J. Peters, E. M. Pratt, Clark H. Rutter, Rudolph Safer, A. J. Sheils, W. Stelcik, A. H. Travers, W. K. Waters, Belle M. Whitson, B. L. Wright.

## Subjects for Competition

"Nature-Study Subjects." Closes July 31.

"Figures in Landscape." Closes August 31.

"Animals in Landscape." Closes September 30.

"Marines." Closes October 31.

"Camp-Scenes." Closes November 30.

"Flashlights." Closes December 31.

"The Spirit of Christmas." Closes January 31.

"Miscellaneous." Closes February 28.

"The Spirit of Winter." Closes March 31.

"Home-Portraits." Closes April 30.

"Miscellaneous." Closes May 31.

"The Spirit of Spring." Closes June 30.



Photo-Era Prize-Cup

In deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup of artistic and original design, suitably inscribed, as shown in the accompanying illustration.



Of all God's gifts to the sight of man color is the holiest, the most divine, the most solemn.— *Ruskin.*



A LONELY VALLEY

Copyright, 1918, Houghton Mifflin Co.  
CHARLES E. WALMSLEY



## Animals in Landscape — Photo-Era Contest Closing September 30, 1916

THE subject for this month's contest is so similar to that just passed that what was said regarding "Figures in Landscape" in last month's issue may well be applied to this contest also. The emphasis is not on the landscape, but on the animals, and they must be made to dominate the scene.

Generally speaking, there should be only one kind of animal in a group. Of course, there are many legitimate exceptions to this rule, such as a hunting-scene, when both horses and dogs are expected, a shepherd-dog with sheep, or some such logical juxtaposition; but not a motley collection of horses, cattle and sheep, just because they chance to be found pasturing together.

Perhaps the animal that lends itself most graciously to pictorial arrangement and has been as many times depicted as any by artists, both of the lens and brush, is the ever docile sheep. The name most inevitably associated with this subject is that of the Dutch artist, Anton Mauve. The most attractive of his pictures show the massed flock either feeding quietly in open fields or driven homeward in the evening light, the little lambs trailing along at the end of the procession.

A photographic treatment of the same subject is reprinted on the following page from PHOTO-ERA for November, 1913. Here is a genuine "picture," expressed by whatever medium, and one well worthy of comparison with the product of the best painters. Though the flock occupies a rather small part of the picture-space, it is so lighted and so placed at the focus of all the leading lines of the composition that it easily dominates the picture. The soft, luminous light in the sky and the mist-filled valley, the admirable spacing and the way all the lines focus, the slopes of the hills, the faintly suggested lines of the path in the foreground and the gulleys in the misty distance, the dark accents of the tree, setting off the strong whites of the huddled flock — all mark the master-workman. The back-lighting, as here used, is especially pleasing with sheep. The white light on the woolly backs and the long shadows falling toward one are particularly attractive.

Another sheep-picture may be found on page 65 of PHOTO-ERA for February, 1913. Here the background has been very well managed — the dark uprights of the tree-trunks being well grouped and the glimpses of sky well subdued. The grouping of the sheep is less pleasing, and they are almost exactly in the center of the picture-space. In the issue for March, 1914, a very attractive little picture may be found on page 142. The lines of the picture are good, also the spacing and the general atmospheric effect. The picture by the same worker, on the opposite page, is not so successful. The striped effect of the boarding which forms the background is bad, and there is no sort of coherence in the grouping; it is simply a collection of individuals.

When one thinks of animal-pictures, those by Rosa Bonheur come at once to mind, and many of her pictures have landscape-settings. "The Scottish Raid" shows the long-horned, shaggy Scotch cattle coming over the crest of a near hill, driven by the raiders in their "plaids." Her "Oxen Ploughing" shows two or three pairs of oxen straining at the plow as it turns over the brown earth. Her famous "Horse-Fair" is also an admirable illustration of our subject, and any similar theme might well be worked up with the camera.

A splendid example is Troyon's "Oxen Going to Work." The landscape is a perfectly simple level country with the group of oxen and their driver looming large in the center. The early morning-light casts huge

black shadows of the group toward the foreground. The whole is absolutely simple, and therein lies a large part of its charm. Cattle knee-deep in some cool stream or lying under the shady branches of trees are splendid subjects. On page 12 of PHOTO-ERA for July, 1913, is a group of cattle grazing. It is pleasing on the whole, though the units are scattered and lack concentration of interest.

Photographing a group of animals of any sort is not an easy matter. As a rule they are very curious, and the appearance of so strange and unusual an object as a camera is the signal for immediate interest and investigation. So often one sees a group of cattle that is good in arrangement and would make an ideal picture could they be caught just as they are; but if the cattle are to form the chief item in the arrangement one cannot be content to stay the other side of the fence, but must shorten the distance. As soon as his presence is detected, up come the heads; the cows that are lying down scramble awkwardly to their feet and the whole bunch scatters, or comes so close to the camera that no picture is possible. Sheep are especially apt to "rush" the camera, and it is often necessary to wait for some time, until, having given close inspection and found no danger imminent, they fall to grazing again.

With sheep, however, a satisfactory rearrangement seems more often possible than with cows, the latter being more likely to scatter, and not fall together again in a pleasing group. For this reason it is sometimes better to take a picture from a discreet distance and then enlarge the part desired. This is less satisfactory, however, for several reasons, one of the chief being that one loses the plane-values by this method, not enough difference being evident between background and foreground.

On the western ranches there are great opportunities to get masses of cattle and also the picturesque horses or "cow ponies." A horse is one of the most beautiful animals one could wish — when at his best; but his anatomy is "various." Horses of the Arab type, such as the artist Schreyer delightfully pictures, have not an angle or a straight line in all their beautiful bodies, whereas the western "mustang" is all angles and lines. The most picturesque type that we have in the east is, possibly, the "farm-horse." Usually heavy and "stocky" in build, he fits into the landscape nicely and is a splendid subject. PHOTO-ERA for May, 1913, has on page 214 a photograph of a fine pair of work-horses. The picture is excellent, but one could wish that they might have been caught straining at the collar instead of merely "resting." Facing this is a splendidly done cow's head. Another picture of a pair of work-horses resting may be found on page 23 of the July, 1913, issue. This is the opposite of the other just referred to, as here the horses form a dark accent against a delicately rendered spring-landscape, whereas in the former the horses concentrate the light and are white against a simple, low-toned field. The nose-bags are rather a displeasing accessory.

To get pictures of wild animals of sufficient size to dominate a landscape is no easy task. In some of the larger zoological parks the animals may be seen in very natural settings, and ought to be good material, if carefully handled. Not of this sort, however, but taken in the wild, is the excellent group of deer on page 182 of PHOTO-ERA for October, 1913. It is seldom that one sees so natural and unstartled looking a group of these timid creatures. The usual picture of them shows a wild-eyed terror just about to vanish in wild flight. This group, however, shows them quite at ease, some grazing, and only one looking toward the camera. The background, too, is well managed and simple.



THE IDLER

W. T. STARR

Travelers in the Orient have many picturesque scenes to choose from. The camel is, despite its grotesqueness, a most picturesque animal; and one of the most effective pictures of the desert I have ever seen shows one solitary camel in the foreground standing out against the sky, with the level waste of sand behind it and the pyramids as a balance in the far distance.

Patience is a necessary virtue where animals are to be dealt with, and nothing is gained, but much lost, by being in a hurry. Unless one is willing to take things slowly, and yet be ready to snap on the instant when one's patience is rewarded by a good grouping, there is little chance of success. As was said last month, care must be taken to keep the background simple, and all possible means used to concentrate interest in the animals themselves.

KATHERINE BINGHAM.

### Strong Prints from Weak Negatives

A. H. HALL, in comparing practicable methods for getting a vigorous print from an extremely weak negative, suggests as the easiest method the making of a weak gaslight print — i.e., to give an exposure that is too short to obtain full density, but long enough to give full detail without veiling, and to intensify by the well-known bichromate method, followed by redevelopment with amidol. For the development of the print, in the first case well-restrained pyro-soda is best. Development will be somewhat slow, and unless the negative is quite abnormally thin, full density can often be obtained without any further manipulation.

The print may be of a pleasing sepia, but is more likely to be a most unpleasant greenish black. It is, therefore, better to stop development before full density is obtained, and intensify as suggested above, when the resulting print will be found to be a pleasing black.

A method that gives even finer results, but is rather more trouble, is to make a weak print, harden it and make an ozobrome on top of the image so formed. The print should then be dried, and when dry, the underlying image can be redeveloped with amidol or toned in the sulphide bath. Very fine results can be obtained by this means. A sepia bromide on a print that has been redeveloped with amidol gives a very fine warm black. The secret of both these methods is to get a print in the first place that has no signs of veiling, yet is as strong as possible. This entails several trials to get the exact exposure.— *The Amateur Photographer*.

### Marking Plates

A FRIEND of mine adopts the most practical way of marking plates of which I have ever heard. He takes his six holders for twelve plates and through the rebates he drills small holes. One hole in top left-hand corner for No. 1, two holes for No. 2, three for No. 3. One hole in bottom left-hand corner for No. 4, two for No. 5 and three for No. 6. One hole in top right-hand corner for No. 7, and so on to the third hole in the bottom right-hand corner for No. 12. When the slide is pulled out to expose the plate, the light-action through these little round holes develops up as dots.

SYDNEY J. ENGLAND, in *Photography and Focus*.





# THE CRUCIBLE

A MONTHLY DIGEST OF PHOTOGRAPHIC FACTS  
 With Reviews of Foreign Magazines, Progress and Investigation  
 Edited by PHIL M. RILEY

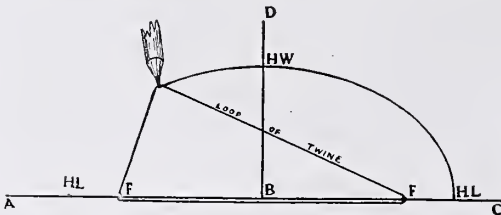


## Hot-Weather Reminders

THESE are the days for free use of the thermometer, ice, amidol, formalin, potassium permanganate, grain alcohol and the electric fan, if success would attend.

## How To Make Oval Masks

It often happens that a photographer needs an oval mask of a particular size, and the usual method of making it consists in securing two stout pins into a drawing-board, over which has been laid a piece of masking-paper. Then, by means of a loop of string placed over the pins, and a pencil, an oval is described on the paper. It is, however, no easy thing to arrive at the exact length of loop to use and the distance of the pins from each other by mere experiment. It is possible, however, to draw an oval of any shape and size by observing the following rules, and it may afterwards be easily cut out either with a pair of curved manicure-scissors or a sharp knife. The larger sizes do not need the scissors to be curved.



On a piece of masking-paper (i.e., either black or orange paper) of the size desired mark the center (B), and draw horizontal and vertical lines through it. Divide the length of the desired oval by two. Call it "H.L." (half-length). Mark this distance on the horizontal line (A.C.) on each side of the vertical line (B.D.).

Next divide the width of the desired oval by two, and we will call it "H.W." (half-width). Mark this distance on the vertical line (B.D.) commencing from B. Then take a slip of paper (or use a pair of compasses) the exact length of "H.L." from B. Place one end exactly at "H.W." and the other end exactly on the horizontal line on each side of B. The point (on each side where the slip of paper meets the horizontal line) will give the exact place to drive in the pins (or thin wire nails), as shown at F. and F. A loop of thread, or fine twine, of the exact length to reach from one nail (F) past the other nail to H.L., is then placed over both nails, or pins; and a pencil-point inserted in the H.L. end of this enables one to describe a perfect oval of the dimensions required. Although this is a very old dodge, there are few who are acquainted with the rules given above; and, further to simplify matters, a table is appended herewith giving a number of measurements in inches and fractions thereof, which will enable any one to produce at once any of the usual sizes of ovals called for. All ovals having the same proportion letter are uniform in shape with each other, and may be used together in multiple masking. Those numbered A bear the proportion of one to two; B, two to three; C, three to four; D, four to five; E, five to six; F, five to seven.

Approximate size of oval	Proportion letter	Length of loop	Distance of nails apart
1 1/2 x 1	B.	1 5/6	1 1/8
2 x 1 1/2	C.	1 11/16	1 5/16
2 1/4 x 1 3/4		1 7/8	1 1/2
2 1/2 x 1 1/2		2 1/4	2
2 1/2 x 2	D.	2	1 1/2
2 3/4 x 1 3/4		2 3/8	2
2 3/4 x 2 1/8		2 3/4	2 1/4
3 x 1 3/8		2 1/4	2 1/4
3 x 2	B.	2 3/8	2 1/4
3 x 2 1/4		2 1/2	2
3 x 2 1/2		2 1/4	1 1/2
3 1/2 x 1 3/4		3 1/4	3
3 1/2 x 2 1/4	F.	3	2 1/2
3 1/2 x 2 3/8		3 1/4	2
4 x 2	A.	3 3/4	3 1/2
4 x 2 1/4		2 1/2	3
4 x 3	C.	3 1/6	2 5/8
4 x 3 1/8		3 1/4	2 1/2
4 x 3 1/2		3	2
4 1/4 x 3 1/4		3 1/2	2 3/4
4 1/4 x 3 1/2		3	1 3/4
4 1/2 x 3	B.	3 5/8	3 3/8
4 1/2 x 3 1/2		3 3/4	3
4 1/2 x 3 3/4		3 1/2	2 1/2
5 x 4	D.	4	3
5 1/2 x 3 1/2		5	4 1/2
5 1/2 x 4 1/4		4 1/2	3 1/2
6 x 3	A.	5 9/16	5 1/8
6 x 4	B.	5 1/4	4 1/2
6 x 4 3/8		5	4
6 x 5 1/4		4 1/2	3
6 1/2 x 5 1/2		5	3 1/2
7 x 5	F.	6	5
7 x 6 3/8		5	3
7 1/2 x 5	B.	6 9/16	5 5/8
7 1/2 x 5 3/4		6	4 1/2
8 x 5		7 1/8	6 1/2
8 x 6	C.	6 5/8	5 1/4
8 1/2 x 6 1/2		7	5 1/2
8 1/2 x 7		6	3 1/2
9 x 6	B.	7 7/8	6 3/4
9 x 7 1/2		7	5
10 x 8	D.	8	6
11 x 8 1/2		9	7
11 x 10		8	5
12 x 6	A.	11 1/8	10 1/4
12 x 8	B.	10 1/2	9
12 x 9	C.	9 1/6	7 7/8
12 x 10	E.	9 1/2	6 9/16
14 x 10	F.	12	10
15 x 11 1/2		12	9
16 x 12	C.	13 1/4	10 1/2
17 x 14		12	7
18 x 15	E.	14	10
20 x 16	D.	16	12
22 x 17		18	14
24 x 12	A.	22 1/4	20 1/2
24 x 16	B.	21	18
24 x 18	C.	19 3/4	15 3/4
24 x 20	E.	18 3/16	13 1/8

ARTHUR WHITING, in *The British Journal of Photography*.



FRUIT OF THE VINE

WILLIAM S. DAVIS

### Developing Roll-Film in a Tray

THAT there are two or more ways to do a certain thing cannot be denied. Many photographers develop roll-film in a tray despite the convenience of the tank, for reasons unnecessary to state. It is merely my method of handling the film in the tray that I wish to mention. The old seesaw method of keeping the film in motion is somewhat tiresome, and it is almost impossible to avoid splashing the developer, or perhaps dropping the film outside of the dish, especially when examining the film.

Firstly, it is always advisable to wet the film before developing. This not only helps to get even action of the developer, but it makes the film more pliant. As the film has the tendency to roll up emulsion-side inwards — as when in the cartridge — it is allowed to roll up again after removal from the so-called duplex paper. It is then placed in clean water, and manipulated as explained later. Having done this a short while, place the wet curled-up film in the left hand, and partly unroll the outside end and immerse face down in the developer. Then, while unrolling the film with the left

hand, push the film gently into the developer, and the end first immersed will roll up in the solution spontaneously. Having immersed the film entirely in the developer, press on this rolled-up end to unroll it, and the other end will assume the same position. Reversing this operation, when either end of the film appears, will keep the film in motion constantly. If you desire to examine the film, this can be done easily by grasping the two rolled-up ends and holding them before the safe illuminant.

A small dish should be used, with sufficient quantity of developer, and it seems hardly necessary to state that the film must not be allowed to remain curled up in the developer for any great length of time, also that the film may be manipulated in the same way in the fixing-bath.

By giving this method a trial, you will readily see its simplicity, I am sure, and use it altogether, without the slightest doubt of its merit. It constitutes one of those many simple "dodges" in photography which contribute toward time- and labor-saving.

*C. Howard Schotofor.*





# BEGINNERS' COMPETITION



Closing the last day of every month  
Address all prints to PHOTO-ERA, Round Robin Guild Competition  
383 Boylston Street, Boston, U. S. A.

## Prizes

*First Prize:* Value \$5.00.

*Second Prize:* Value \$2.50.

*Third Prize:* Value \$1.50.

*Honorable Mention:* Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

A certificate of award, printed on parchment paper, will be sent on request.

*Subject* for each contest is "*Miscellaneous*"; but only original prints are desired.

Prizes, chosen by the winner, will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

## Rules

1. This competition is open only to members of the Round Robin Guild. Membership, however, is free to all subscribers; also to regular purchasers of PHOTO-ERA on receipt of their name and address, for registration, and that of their dealer.

2. All Guild members are eligible in this competition provided they never have received a prize from PHOTO-ERA other than in the Beginners' Class. Any one who has received only Honorable Mention in the PHOTO-ERA Advanced Competition still remains eligible in the Round Robin Guild Beginners' Competition; but upon winning a prize in the Advanced Class, one cannot again participate in the Beginners' Class. Of course, beginners are at liberty to enter the Advanced Class whenever they so desire.

3. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. *Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.* Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P. or black-and-white paper having the same gradations and detail.

4. *Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data. Criticism on request.*

5. *Each print entered must bear the maker's name, address, Guild-number, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what contest it is intended.*

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit being given.

7. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with double thicknesses of stiff corrugated board, not the flexible kind, or with thin wood-veneer. Large packages may be sent by express very cheaply and with indemnity against loss.

## Awards — Beginners' Contest

Closed May 31, 1916

*First Prize:* Guy E. Osborne.

*Second Prize:* Edward L. Austen.

*Third Prize:* Ikko Kurauchi.

*Honorable Mention:* Dr. W. G. Adams, J. Louis Cunningham, Mrs. H. G. Reed, Harlow L. Rockwell, Kenneth D. Smith, M. C. Still, Karl Tausig, William Taylor, Walter G. Willis.

Special commendation is due the following workers for meritorious prints: Foster Lardner, A. S. Upton, Elizabeth B. Wotkyns.

## Why Every Beginner Should Compete

THE trouble with most competitions is that they place the beginner at a disadvantage. If advanced workers be allowed to compete, beginners have little chance to win prizes, and so quickly lose interest after a few trials.

There are two monthly competitions in which prints may be entered with prizes commensurate with the value of the subjects likely to be entered. They are: The Round Robin Guild Competition and the PHOTO-ERA Competition. The former is the better one for a beginner to enter first, though he may, whenever it pleases him, participate in the latter. After having won a few prizes in the Beginners' Class it is time to enter prints in the PHOTO-ERA Competition for advanced workers.

As soon as one has been awarded a prize in the PHOTO-ERA Competition, he may consider himself an advanced worker, so far as PHOTO-ERA records are concerned, and after that time, naturally, he will not care to be announced as the winner of a prize in the Beginners' Class, but will prefer always to compete in the PHOTO-ERA Competition for advanced workers. In accordance with this natural impulse, it has been made a rule by the Publisher that prize-winners in the Advanced Class may not compete in the Beginners' Class.

To measure skill with other beginners tends to maintain interest in the competition every month. Competent judges select the prize-winning prints, and if one does not find his among them there is a good reason. Sending a print which failed to the Guild Editor for criticism will disclose what it was, and if the error be technical rather than artistic, a request to the Guild Editor for suggestions how to avoid the trouble will bring forth expert information. The Round Robin Guild Departments, including those of personal counsel and criticism, form an endless chain of advice and assistance if members will connect the links.

INDUSTRY is more than a process, even more than an art of making good and beautiful things; it is an art of life. Its inevitable product is some sort of human character. As an art it should aspire, as all arts do, to simplicity, skill, obedience to form and method, to symmetry and elegance; aspire to be a recreating as well as an expending of energy, a life beautiful and pleasurable in itself, as well as disciplinary and utilitarian. A business organization should be conceived of as a real standing together of a company of brothers to take care of each other, and enjoy a portion of their lives together.—Edward D. Jones.



# THE ROUND ROBIN GUILD

An Association of Beginners in Photography  
Conducted by KATHERINE BINGHAM



This association, conducted under the auspices of PHOTO-ERA, and of which PHOTO-ERA is the official organ, is intended primarily for the benefit of beginners in photography. The aim of the association is to assist photographers by giving them information, advice and criticism in the Guild pages of PHOTO-ERA and by personal correspondence. Membership is free to subscribers and regular purchasers of the magazine sending name and address to PHOTO-ERA, The Round Robin Guild, 383 Boylston Street, Boston, U. S. A.

## A Powerful Stain-Remover

R. E. BLAKE SMITH recommends as the best method for removing almost all descriptions of stain from the negative the permanganate bleaching- and redevelopment-process as follows:

### Solution A

Potassium permanganate .....	10 grains
Water .....	5 ounces

### Solution B

Sodium chloride .....	$\frac{1}{4}$ ounce
Alum .....	$\frac{1}{4}$ ounce
Concentrated sulphuric acid .....	25 minims
Water .....	5 ounces

The actual bleaching-bath is compounded by taking two parts of solution A and adding it to four parts of solution B. This bleacher works very quickly, and it does not give off noxious chlorine vapor, but is quite pleasant to use. The print is first soaked for two minutes or so in water, and then immersed for ten minutes in a saturated, or nearly saturated, solution of alum. After this it is rinsed under the tap for a few seconds and then put into the permanganate-chloride bleaching-bath.

After bleaching there is almost always left a slight yellow stain (oxide of manganese) on the paper, especially where bleaching has taken place — i.e., on the parts previously occupied by the image. It is best to remove this stain before redevelopment, and in order to do this the print, after rinsing, is placed in:

Alum .....	$\frac{1}{4}$ ounce
Sodium sulphite (cryst.) .....	6 grains
Concentrated sulphuric acid .....	5 minims
Water .....	5 ounces

and when the stain has disappeared, the print is washed in running water for about ten minutes, and then redeveloped in:

Amidol .....	6 grains
Sodium carbonate (cryst.) .....	6 grains
Sodium sulphite (cryst.) .....	.35 grains
Water .....	2 ounces

Finally, a thorough wash brings the process to an end.  
*The British Journal of Photography.*

## Testing Prints for Permanence

IN one sense, the only way to test the permanence of a print is to keep it for the required time, which is, of course, an impracticable method in almost all cases. Attempts to hurry up the action of the air or of damp are all open to the objection that conclusions drawn from them may be in error. It does not follow at all that, because a print will resist a great deal of damp and a very impure air for thirty days, it will be unaffected by a slight trace of moisture and slightly impure air in thirty years, or *vice versa*. We may say, with some appearance of reason, that if it is unaffected

by the strong agents in a short time it is not likely to be affected by much weaker ones in a long time, but we must not lose sight of the fact that this is only a probability, nothing more. If we wish to make such a test the prints should be placed where there is no doubt about the rigor of the conditions. A room in which gas is burned for several hours every day will have a stratum of very foul air near the ceiling unless its ventilation is very exceptional, and prints placed high up will be exposed to its full force. If a dish of water is kept near them, the action of the impurities in the air will be supplemented by that of damp; while, by a simple arrangement of a light-trapped box, it will be possible to expose some of the prints to the air and damp without exposing them to light, while others can be exposed to light as well. Prints that stand such treatment for long may have a presumption of permanence, since the test is a drastic one. Those who apply it will be surprised to find how quickly some will alter under it, although similar prints kept in a drawer or album may be unchanged for years. As most plain paper alters in color under the action of air, damp and light, it does not follow that a change in the print indicates that the photograph is not permanent; it may be that the paper itself is what has changed.

*Photography and Focus.*

## Avoiding Pyro-Stains

S. ROBERTS uses the following method for avoiding stained fingers when employing the pyro-soda developer: During development keep the tap running and have by the side of the developing-dish a bowl containing a weak solution of hydrochloric acid (about one in fifty). Never dip dry fingers in the developer; rinse, both before and after, and immediately the plate is immersed in hypo rinse the fingers again, and dip them in the weak acid. He has developed hundreds of plates in pyro and never had fingers with the suspicion of a stain since following the above method; the acid, being so very dilute, has no deleterious effect on the skin.

*The British Journal of Photography.*

## Enlarged Negatives from Autochromes

IT sometimes happens that one has an autochrome of exceptional beauty from which it is desired to make a larger print in monochrome, and for this purpose the autochrome can be used as the intermediate positive from which enlarged negatives are made. If the enlarged negative is made on an ordinary plate, the granular effect of the autochrome will be very apparent; and to get a smooth negative with this granular effect eliminated one should use an orthochromatic plate with a three-time or preferably five-time screen. This will give an enlarged negative of a fine quality, equivalent to an original negative made with a ray-filter, as practically all the colors of the autochrome will be represented in the enlargement in their proportional values of black and white.—*The Amateur Photographer.*





THE EVENING-HOUR

GUY E. OSBORNE

### Sensitiveness of Plates

WHEN comparing ordinary and orthochromatic plates for speed, due account must be taken of the nature of the light by which the comparison is made. All the usual forms of artificial light used for domestic purposes are richer, proportionately, in yellow rays than is daylight. The orthochromatic plate or film, therefore, having been specially sensitized for yellow light, will seem to be much faster to such illumination than an ordinary or non-orthochromatic plate, although, tested by daylight, the latter might be the more sensitive of the two. In the same way the orthochromatic plate seems to gain in rapidity, comparatively speaking, towards evening, because the light then tends to become yellower. It is evident, therefore, that for portraiture by artificial light and similar work there is a great advantage in the use of orthochromatic over ordinary plates, as the exposures are reduced. In such cases the use of a yellow screen over the lens can generally be dispensed with altogether, as the light is already "filtered," so to speak, by its very color.

*Photography and Focus.*

### Removing Pyro-Stains

ACCORDING to *The Pharmaceutical Journal*, a solution of 50 grams of sodium sulphate and 23 grams of calcium chloride in 500 ccs. of water is successful in removing pyro-stains from the fingers.

### Removing Drying-Marks from Negatives

O. E. CHALLIS states that he has cured several negatives that had been splashed and afterwards dried, leaving a spot of different density, by bleaching in an ordinary ferrieyanide and bromide bleaching-bath and then redeveloping with amidol. This method ought to be quite satisfactory for negatives that have had rain-spots on them; at any rate it does not damage the negative in any way.

*The British Journal of Photography.*

THE weight of the world rests upon a pile of books. And strong books they are — for the weak ones are soon crushed. In a world without books life would be intolerable.—*Glen Buck.*

## ANSWERS TO QUERIES

*Subscribers and regular readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Correspondence Department, PHOTO-ERA, 383 Boylston Street, Boston, U. S. A. If a personal reply is desired, a self-addressed, stamped envelope must be enclosed.*

**H. E. B.**— Yours are **beginners' troubles**, viz., too small developing-trays, which do not allow uniform action of developing, and if the solution is too meager, it does not cover the plate readily, thus causing spots or places of varying density. The developer for a 4 x 5 tray should be not less than three ounces; it should also be thoroughly mixed before being flowed over the plate, or the latter placed in it. Do not purchase M. Q. tubes of unknown quality; the best is none too good. A dealer who advertises in PHOTO-ERA may safely be trusted.

**O. P. V.**— To develop a **panchromatic plate**, which is sensitive to all colors, that light must be used by which one can see the most with the least possible illumination, which is a green safelight. Such a safelight usually consists of a sheet of glass coated with a bright yellow gelatine film, and another sheet coated with a bright green film, bound face to face, with a thick sheet of green paper between. Obviously these colors must be accurately adjusted in the spectroscope and by trial with the plates. Every manufacturer of panchromatic plates either sells a suitable safelight or recommends one, and the camerist will do well to adopt it and avoid all difficulty.

**C. B.**— **Negatives coarse in grain** are often caused by too warm a developer. This is particularly true of tray-development, for the solution more easily takes the temperature of the room than does a larger volume of developer in a tank. Forced development, either to bring out more detail in an underexposed negative or to build up contrast in an overexposed negative, is also a cause; likewise too quick drying in a warm place and excess of alkali in the developer. The best results are had by full exposure, normal tank-development at 65 degrees and moderate drying in a cool current of air. In a feature article on this subject in PHOTO-ERA for April, 1915, by E. J. Wall, F.R.P.S., he suggests the use of emulsions of medium speed, a rapid rather than a slow tank-developer and placing the negative to be enlarged in contact with opal glass, so as to reduce to the minimum the scatter of light produced by the silver particles.

**W. A. T.**— The best **hypo-eliminator** is potassium permanganate. Put enough into any quantity of water to turn it pink; the presence of hypo will clear the solution. Continue to treat with fresh permanganate solution until the color is not removed.

**H. N. D.**— Replying to your query regarding the **photography of clouds**, we assume first of all that it is your intention to photograph clouds and landscape together rather than the clouds alone. This being the case, all you can do without special equipment is to expose for the landscape and let the clouds come as they will with the aid of a color-filter and orthochromatic plate or film. The exposure, of course, should be as short as possible yet ensure the desired amount of shadow-detail. In the PHOTO-ERA Exposure-Guide you will notice that as compared with an average landscape the ratios given for clouds are:  $\frac{1}{3}$  for studies of sky and white clouds;  $\frac{1}{4}$  for studies of rather heavy clouds, and  $\frac{1}{2}$  for studies of dark clouds.

By far the most satisfactory method, however, is to employ a foreground ray-screen which is so constructed that the color diminishes gradually from a strong orange at the top to complete transparency at the bottom. In this way color-correction is had and much more nearly an even exposure of both sky and foreground. One of these costs no more than the ordinary screen. For general work with an ordinary screen, a three-time glass is most popular and very satisfactory.

Ordinarily clouds are best photographed with a wide-open lens or the largest marked stop, because sharp definition is not desired. However, the use to which the work is to be put, whether enlargement or contact printing, and the character of the clouds themselves should influence the result. The aim should be to have the clouds correspond with the foreground in degree of definition; any marked difference will be noticeable.

Development in the tank cannot be excelled, if the time of development is reduced to about two-thirds normal, as a somewhat thin negative is preferable.



THE SHADOW ON THE ICE

E. L. AUSTEN

SECOND PRIZE — BEGINNERS' CONTEST





## PRINT-CRITICISM



*Address all prints for criticism, enclosing return-postage at the rate of one cent for each two ounces or fraction thereof, to Correspondence Department, PHOTO-ERA, 383 Boylston Street, Boston, U. S. A. Prints must bear the maker's name and address, and be accompanied by a letter, sent separately, giving full particulars of date, light, plate or film, stop used, exposure, developer and printing-process.*

F. C. B.—The sky and foreground in your print "Over the Hill" occupy exactly equal parts in the picture-area, which is a fault in good composition.

"Up-Stream" is scattered all over with interest—another fault in good composition. The eye cannot rest anywhere, and, although in nature such a scene may be attractive, when photographed it assumes a restless effect. Its point of interest should be centralized. It also lacks simplification of detail.

"Snow-Ball" would attract no attention except from a relative of the little boy. The tree-trunk does not add to the pictorial quality of the print, and, apart from its personal interest, the picture lacks distinction.

The street-scene is the best; but there is nothing in it to attract special interest. If Milton or some other great man had been born in one of the houses the fact would impart interest to the picture.

L. M.—The group, "Lovers," is far from being a portrait, but distinctly a genre, and a good one at that. The pose is extremely happy, the lighting and the technique good; but the girl's face is somewhat obscure, probably due to movement.

F. J. A.—The water in your view seems to be running down hill toward the left instead of being level. The water-line divides the picture into halves, which is contrary to a well-known rule of composition. The proper way would be to trim the print at the top and bottom; but this cannot be done, because the picture was composed badly in the beginning. The interest is divided between the foreground and the sky. It should be centralized if possible. The foreground is really the most interesting part of your picture; but you have three distinct horizontal divisions—the water, the distant shore and the sky—which triple interest or division is also contrary to good taste in composition. The exposure appears to be correct and the technical result very good, when one considers the weak light in January at 4 P.M.

P. W. W.—You have an attractive subject in "Study," although we believe the effect of so small a print would be better on a smooth matte rather than the present linen-surface gaslight paper.

B. S. G.—Your portrait "Hello!" appears to have been enlarged too much from a very small negative. A paper of rougher surface will conceal this to a certain degree, and a buff stock will give more character to the face and tone down the highlights, which are now chalky.

J. B.—"The Willows" is a pleasing landscape, but a shade or more too dark in the present print.

The two winter-landscapes made with a soft-focus lens show rather too much diffusion for their size. The use of a smaller diaphragm would have improved matters, particularly in "Winter-Morning," which provides the material for an excellent subject.

J. L. C.—"The Glen" is technically excellent, but the subject seems to lack a center of interest.

E. M. B.—Your photograph entitled "Birches" is certainly underexposed, and so lacks shadow-detail. The print also appears to have been snatched from the developer before complete in order to save as much of the values as possible, the result being a streaky tone.

V. I.—Except for the halation around the window your photograph entitled "Sunday Morning" is quite successful. You should read the article by Philip Conklin in the July, 1915, issue of PHOTO-ERA on "How to Prevent Halation."

J. G. W.—"The Last Touch of Winter" would be much improved by printing on a black-and-white gaslight paper, or, better still, enlarging it on bromide. Glossy prints are not so pleasing as those on smooth matte papers; and, of course, the warmth of brown or purple tones in printing-out papers is inappropriate for a winter-subject.

A. F. B.—"On Barnegat Bay" contains too much material for a single picture and the result is confusing. Moreover, there seems to be no connection between the boats scattered along the shore and the man and the dog. His costume makes it appear that he did not come in one of the boats nor intend to use one.

B. L. W.—You have a good composition and an excellent subject in "A Suburban Home." Sunlight is needed, however, to give life to the subject, the present print being flat and utterly without vigor.



A BIT OF THE OLD WABASH CANAL

IKKO KURACHI

THIRD PRIZE — BEGINNERS' CONTEST

E. G. R.—“The Roadhouse” is a well-lighted night-picture with an effect of artificial light nicely rendered. The parkway-sign, however, is unfortunate, being so prominently in the foreground and its shadow so conspicuous.

L. M.—The highlights of your home-portrait seem to have strayed downward from the face to the shirt-waist of the subject, and the shadow side of the face is not quite sufficiently illuminated. The composition is excellent.

E. J. K.—Your “Portrait” offers little opportunity for criticism. It is well posed and lighted and deserves great praise.

J. F. E.—“On the Banks of the Little Cedar” undoubtedly has great possibilities, but the real picture would appear to be somewhat to the right of what you have included, taking in considerable of the right-hand shore. Of course the composition is seriously lacking in that it has no cloud-effect.

C. M. K.—The chemical quality of your photograph “At the Window-Seat” is particularly fine; likewise the composition of “Kootenay River Rapids.”

In “Christina Lake” the tall straight trees seem rather too near the margin of the print.

W. J. W.—“Almost Home” is nearly flawless as a composition; virtually its only fault lies in the presence of the twigs at the left, which are too prominent and too black. These could be worked out on the negative or even on the print, or at least lightened in tone.

V. M. K.—Greater concentration of interest could be secured in your spring-scene by shading the lower portion to produce deeper printing at the top, which is now rather too light. A strong cloud-effect would have relieved this composition.

W. V. V.—You have an attractive little picture in “Daddy’s Boy,” but the print is so small that its excellences pass unnoticed. Why not enlarge this on a soft-working paper?

L. C.—Your photographs appear to be merely snapshots and can hardly be considered on an artistic basis. That entitled “In the Garden” shows the distortion which always results from tilting the camera upward in photographing architecture. In “Laughing Water” the sunlit areas are much too white, apparently the result of too strong development.

J. G. W.—The spontaneity of your picture entitled “Papa’s Watch” is somewhat lessened by the confusing background of small framed pictures on the wall and the sofa-cushions with prominent lettering upon them, both of which detract from the central interest. A plain background is never objectionable, and anything else must be used with the utmost discretion, especially when, as in this instance, it is so near the sitter as to be in virtually the same focal plane.

H. G. R.—Your photograph “Meditation,” which we believe has been entered in a previous contest, suffers, like several others that you have sent us, from an utter lack of detail and texture in the very light dress of the child. This is probably due to strong development. Also you will invariably find it advisable to use orthochromatic plates and a color-screen for this work. It is always essential in portraiture to expose amply, but to aim for a somewhat thin negative.

J. H. S.—Of course it is often difficult to find a satisfactory viewpoint from which to photograph high buildings. That does not make a foreground consisting of a board-fence any more attractive, and if it is impossible to avoid such a foreground, the photograph had better not be made at all. Incidentally, the print you have sent is considerably over-timed, and appears to have been taken hastily out of the developer to save it, the result being entire loss of sparkle on the snow.

H. L. R.—As a general thing, child-pictures made in the home have only a personal interest. Usually, the artistic value is very much overestimated, and the analytical judgment of the author yielding to the sympathetic interest in the picture. Critically speaking, however, the child’s head in your picture is tilted too much to the right, and the highlight is the right sleeve of the dress, which, in this instance, is inconsistent. For photographic purposes it would have been better if the child had been dressed so as not to produce so high a key. There is an undeniable sweetness and naturalness in the pose and expression, but, as already stated, the artistic value is less than the personal interest in the child. If the head were less inclined and the highlight less intense, the picture would at once gain in artistic value.

J. M.—The picture of the big landscape resembles an etching in character and effectiveness; but photographically it lacks proper tonal values. Nearly all of the shadows are inky black, and the halftones are in too high a key. Why not give it another enlargement with more exposure, thus creating more harmony in the masses — less contrast. The picture is good. It is a graphic suggestion of a high-class etching; but the foreground in so light a key prevents the eye from being carried toward the center, which, in your picture, should be the main point of interest.

M. J.—The figure-study — the young girl sitting by the fireside — appears incongruous, because of the light outdoor-dress. Why not a suitable indoor-costume? In composition of line your picture is a great success; but it does not balance correctly in point of light.

The picture of the same model leaving or entering at the door is suggestive, and therefore more convincing. Figures dressed in light costume are very beautiful to look at outdoors; but when in a photograph they conflict with the dark foliage. To harmonize, the surroundings should be in a lighter key, or the model could be arrayed in a costume of a somewhat lower key.

H. G. R.—“Baby” and “Portrait” are both pleasing home-portraits. The “Book Lover,” of course, is faulty in the distortion of architectural verticals, which should always be plumb.

You had an excellent subject in “The Pergola in January,” but unfortunately all suggestion of detail and snow-texture has been lost because of too strong development.

J. L. C.—Your several photographs all show excellent technique that violates few of the common set principles, but most of them lack a certain “bigness” which we like to see. In other words, they for the most part are too inclusive, and even a closer viewpoint would have been more preferable. Those pictures which are so simple that anything can be omitted without seriously impairing composition are invariably best.

J. G. B.—While your collection of home-portraits is distinctly pleasing, the shadows are rather more solid than we like to see. In one or two instances the prints may be perhaps a tone or more too black. More often, however, the result is apparently due to undermining or exaggerated control of the light for the purpose of concentration. If the latter be the cause, we believe that this is carried somewhat too far.

E. L. C.—Your photograph of Jackson Lake is an interesting one, apparently enlarged, and perhaps a paper which would give a trifle more vigor would improve the result and obviate the present mottled effect throughout.

Your market-scene is rather too inclusive. Pictures of this sort are best when they single out some particularly interesting bit.



# Photo-Era Exposure-Guide

Calculated to give Full Shadow-Detail, at Sea-Level, 42° N. Lat.

For altitudes up to 5000 feet no change need be made. From 5000 to 8000 feet take  $\frac{3}{4}$  of the time in the table. From 8000 to 12000 feet use  $\frac{1}{2}$  of the exposure in the table.

Exposure for average landscapes with light foreground, river-scenes, light-colored buildings, monuments, snow-scenes with trees in foreground. For use with Class 1 plates, stop F/8, or U. S. 4. For other plates, or stops, see the tables on the opposite page.

*These figures must be increased up to five times if the light is inclined to be yellow or red. †Latitude 60° N. multiply by 3 : 55° : 2 ; 52° : 2 ; 30° : 3. ‡Latitude 60° N. multiply by 2 : 55° : 2 ; 52° : 1½ ; 30° : 3. §Latitude 60° N. multiply by 1½ : 55° : 1 ; 52° : 1 ; 30° : 1½. ¶Latitude 60° N. multiply by 1½ : 55° : 1 ; 52° : 1 ; 30° : 1½.	MONTH AND WEATHER																			
	JAN., NOV., DEC. †					FEB., OCT. ‡					MAR., APR., AUG., SEPT. ¶					MAY, JUNE, JULY §				
	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull
HOUR																				
11 A.M. to 1 P.M.																				
$\frac{1}{32}$	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{32}$	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{50}$	$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{1}{60}$	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$	
10 11 A.M. and 1-2 P.M.																				
$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{40}$	$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{2}$	$\frac{1}{60}$	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$	
9-10 A.M. and 2-3 P.M.																				
$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{2}{3}$	$1^*$	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$1^*$	$\frac{1}{40}$	$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{2}$	$\frac{1}{50}$	$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	
8-9 A.M. and 3-4 P.M.																				
					$\frac{1}{5}$	$\frac{1}{2}$	$1^*$	$1\frac{1}{2}^*$	$3^*$	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	
7-8 A.M. and 4-5 P.M.																				
										$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{3}$	$\frac{2}{3}$	
6-7 A.M. and 5-7 P.M.																				
										$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	$1^*$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	
5-6 A.M. and 6-7 P.M.																				
															$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{3}$	$\frac{2}{3}$	$1\frac{1}{2}^*$	

The exposures given are approximately correct, provided the shutter-speeds are accurately marked. In case the results are not just what you want, use the tables merely as a basis and increase or decrease the exposure to fit the conditions. Whenever possible keep the shutter-speed uniform and vary the amount of light when necessary by changing the stop. Focal-plane shutters require only one-third of the exposures stated above.

**SUBJECTS.** For other subjects, multiply the exposure for an average landscape by the number given for the class of subject.

**1/8 Studies of sky and white clouds.**

**1/4 Open views of sea and sky ; very distant landscapes ; studies of rather heavy clouds ; sunset- and sunrise-studies.**

**1/2 Open landscapes without foreground ; open beach, harbor- and shipping-scenes ; yachts under sail ; very light-colored objects ; studies of dark clouds ; snow-scenes with no dark objects ; most telephoto-subjects outdoors ; wooded hills not far distant from lens.**

**2 Landscapes with medium foreground ; landscapes in fog or mist ; buildings showing both sunny and shady sides ; well-lighted street-scenes ; per-**

**sons, animals and moving objects at least thirty feet away from the camera.**

**4 Landscapes with heavy foreground ; buildings or trees occupying most of the picture ; brook-scenes with heavy foliage ; shipping about the docks ; red-brick buildings and other dark objects ; groups outdoors in the shade.**

**8 Portraits outdoors in the shade ; very dark near objects, particularly when the image of the object nearly fills the plate and full shadow-detail is required.**

**16 Badly-lighted river-banks, ravines, glades and under the trees. Wood-**  
**to 48 interiors not open to the sky. Average indoor-portraits in a well-lighted room, light surroundings.**

**PLATES.** When plates other than those in Class I are used, the exposure indicated above must be multiplied by the number given at the head of the class of plates.

# For Perpetual Reference

For other stops multiply by the number  
in the third column

As all the figures in the table opposite are based upon the use of stop F/8, or U. S. 4, it does not appear here among the ratios for other stops.	U. S. 1	F/4	× 1/4
	U. S. 2	F/5.6	× 1/2
	U. S. 2.4	F/6.3	× 5/8
	U. S. 3	F/7	× 3/4
	U. S. 8	F/11	× 2
	U. S. 16	F/16	× 4
	U. S. 32	F/22	× 8
	U. S. 64	F/32	× 16

## Example

The factors that determine correct exposure are, first, the strength of light; second, the amount of light and dark in the subject; third, speed of plate or film; fourth, the size of diaphragm used.

To photograph an average landscape with light foreground, in Feb., 2 to 3 P.M., bright sunshine, with plate from Class 1, R. R. Lens, stop F/8 (or U. S. 4). In the table look for "Hour," and under the column headed "Bright Sunshine," note time of exposure, 1/16 second. If a smaller stop is used, for instance, F/16, then to calculate time of exposure multiply the average time given for the F/8 stop by the number in the third column of the table for other stops, opposite the diaphragm chosen. The number opposite F/16 is 4. Multiply  $1/16 \times 4 = 1/4$ . Hence, the exposure will be 1/4 second.

For other plates consult the table of plate-speeds. If a plate from Class 1/2 be used, multiply the time given for average exposure, F/8 Class 1, by the number of the class.  $1/16 \times 1/2 = 1/32$ . Hence, the exposure will be 1/32 second.

## Speeds of Plates on the American Market

Class-Numbers. No. 1, Photo-Era. No. 2, Wynne. No. 3, Watkins

Class 1/3, P. E. 156, Wy. 350, Wa.  
Ilford Monarch  
Lumière Sigma  
Marion Record  
Seed Graflex  
Wellington Extreme

Class 1/2, P. E. 128, Wy. 250, Wa.  
Anso Speedex Film  
Barnet Super-Speed Ortho.  
Central Special  
Cramer Crown  
Eastman Speed-Film  
Hammer Special Ex. Fast  
Imperial Flashlight  
Seed Gilt Edge 30  
Wellington 'Xtra Speedy

Class 3/4, P. E. 120, Wy. 200, Wa.  
Barnet Red Seal  
Cramer Instantaneous Iso.  
Defender Vulcan  
Ensign Film  
Hammer Extra Fast, B. L.  
Ilford Zenith  
Imperial Special Sensitive  
Paget Extra Special Rapid  
Paget Ortho. Extra Special Rapid

Class 1, P. E. 111, Wy. 180, Wa.  
American  
Anso Film, N. C.  
Atlas Roll-Film  
Barnet Extra Rapid  
Barnet Ortho. Extra Rapid  
Central Comet  
Imperial Non-Filter

Imperial Ortho. Special Sensitive  
Kodak N. C. Film  
Kodoid  
Lumière Film and Blue Label  
Marion P. S.  
Premo Film-Pack  
Seed Gilt Edge 27  
Standard Imperial Portrait  
Standard Polychrome  
Stanley Regular  
Vulcan Film  
Wellington Anti-Screen  
Wellington Film  
Wellington Speedy  
Wellington Iso. Speedy  
W. & W. Panchromatic

Class 1 1/4, P. E. 90, Wy. 180, Wa.  
Cramer Banner X  
Cramer Isonon  
Cramer Spectrum  
Defender Ortho.  
Defender Ortho., N.-H.  
Eastman Extra Rapid  
Hammer Extra Fast Ortho.  
Hammer Non-Halation  
Hammer Non-Halation Ortho.  
Seed 26x  
Seed C. Ortho.  
Seed L. Ortho.  
Seed Non-Halation  
Seed Non-Halation Ortho.  
Standard Extra  
Standard Orthonon

Class 1 1/2, P. E. 84, Wy. 160, Wa.  
Cramer Anchor

Lumière Ortho. A  
Lumière Ortho. B

Class 2, P. E. 78, Wy. 120, Wa.  
Cramer Medium Iso.  
Ilford Rapid Chromatic  
Ilford Special Rapid  
Imperial Special Rapid  
Lumière Panchro. C

Class 3, P. E. 64, Wy. 90, Wa.  
Barnet Medium  
Barnet Ortho. Medium  
Cramer Trichromatic  
Hammer Fast  
Ilford Chromatic  
Ilford Empress  
Seed 23  
Stanley Commercial  
Wellington Landscape

Class 5, P. E. 56, Wy. 60, Wa.  
Cramer Commercial  
Hammer Slow  
Hammer Slow Ortho.  
Wellington Ortho. Process  
W. & W. Process Panchromatic

Class 8, P. E. 39, Wy. 30, Wa.  
Cramer Contrast  
Cramer Slow Iso.  
Cramer Slow Iso. Non-Halation  
Ilford Halftone  
Ilford Ordinary  
Seed Process

Class 100, P. E. 11, Wy. 3, Wa.  
Lumière Autochrome





## OUR ILLUSTRATIONS

WILFRED A. FRENCH



THE present front-cover and page 64 are embellished with the picture of a swift American yacht, by F. A. Walter, the premier marine-photographer of Greater New York. Perfect workmanship in every respect, mastery in photographing watercraft, an ideal sense of proportion and pictorial beauty, characterize the work of this successful specialist. He never was known to produce a poor picture. In his professional activity Mr. Walter often executed orders that admit of no choice of conditions as to light, atmosphere and right of way. Even then he triumphs over obstacles as few of his fellow craftsmen can do. Camerists ambitious to excel in the exhilarating sport of photographing speeding yachts, power-boats and other watercraft, will be repaid to read his article, "Observations on Marine-Photography," printed with several superb illustrations in August, 1914, PHOTO-ERA. Data: June; noon; bright clouds; 8 x 10 hand-camera; set focus; 13-inch Ross, F/8; stop, F/14; no color-screen;  $\frac{1}{75}$  second; E. K. Standard Imperial Portrait; pyro; print, 8 x 10 Glossy Cyko.

The complimentary things told by Mr. Armstrong of the pictorial ability of members of the Detroit Camera Club, in his brief sketch of that organization in this issue, are well deserved, if one may judge by the accompanying examples. These illustrations were selected, by the Editors, from the club's recent exhibit by members, each of whom was represented by a goodly number of prints, affording one an excellent opportunity to form an opinion of his abilities. The frontispiece presents a style of composition that was introduced into this country by the Swedish painter, Fritz Thaulow, and which has found favor with many American photo-pictorialists, notably Porterfield, Eickemeyer and Vandervelde. It is very effective, and to be commended if the point of sight is logical and convincing, as is the case with Mr. Mixsell's pleasing arrangement. Though the point of sight is in about the center of the picture-space, the center of interest is considerably above it. The reflections do not obtrude themselves, but have been managed with artistic discretion, which appears to have been facilitated by the use of a soft-focus lens. The element of balance affords little room for speculation. It does not appear forced, as is frequently the case, but rather as the natural result of viewing the scene from a convenient point of elevation. The tonal values impress one as correspondingly felicitous. Of course, the suggestions of human forms and faces among the branches are purely accidental. They will amuse those who are interested in the curious.

Data: 3A Filmplate Premo,  $3\frac{1}{4}$  x  $5\frac{1}{2}$ ; Hb Tessar,  $6\frac{1}{8}$ -inch focal length; clear light; film; Premo tank; pyro; enlarged print on Royal bromide paper through chiffon.

The decorative landscape, page 53, is striking in its solid construction. Here, too, fantastic shapes caused by the irregular contours of the silhouetted trees catch the eye of the casual observer. The humorous episode, at the left, created by mere chance — a man gazing at an open-mouthed monster — seems like a merited punishment, for the figure is quite superfluous in the pictorial arrangement.

The landscape, page 54, is peculiarly suggestive of the bareness and barrenness of the winter-season. The chilliness of the atmosphere is enhanced by the gray

and dismal sky — altogether an admirable and imaginative presentation of the subject.

The speeding train, page 55, is a strikingly artistic portrayal of a familiar scene. In the sense of demonstrating the element of speed, it is symbolical, also; for a fast-moving automobile or a running animal does not quite give the feeling of rapid locomotion as does "The Limited."

The picture of a bit of Detroit, page 56, shows the result of artistic conception, feeling and treatment. This is as it should be, for Detroit has taken a high place among the art-centers of America; and among its institutions where art-principles are propagated and applied is its reorganized Camera Club. Unless he has already done so, Mr. Otto Linstead should do for Detroit what Edward Dickson has done for the city of Newark, i.e., prepare a series of local views of impressive pictorial beauty. Such a set of pictures, glorifying Detroit's commercial and industrial supremacy, as might be drawn by Joseph Pennell, would undoubtedly find a permanent resting-place on the walls of the city's Museum of Fine Arts.

Data:  $3\frac{1}{4}$  x  $4\frac{1}{2}$  R. B. Auto Graflex; Spencer Port-Land lens; 9-inch focus; F/5.6; 3-time B. & J. color-screen; March, 10 A.M.; hazy sunlight;  $\frac{1}{10}$  second; Standard Orthonon; Rodinal; enlarged print on Royal Smooth.

The artist, unquestionably capable of such an achievement, is portrayed on page 57 — the work of his brother, Walter A. Linstead. This is evidently a labor of love, a characteristic attitude, although such intensity of thought might be interpreted to presage the planning of just such a pictorial series as has been already suggested.

Data:  $3\frac{1}{4}$  x  $4\frac{1}{2}$  R. B. Auto Graflex; Struss Pictorial lens; 9-inch focus; F/5.5; January, 3.30 P.M.; dull light; 20 seconds; Cramer Iso Portrait; Rodinal in tank; enlarged print on Montauk bromide No. 31.

"The Sentinels," page 58, is a fair example of Mr. Gabriel's suggestive style. As a transitional or transitory phase of pictorial presentation by means of the camera, it doubtless fulfils a mission intended for its devotees.

I have no quarrel with Miss Carey's picture, page 59, excepting that the title does not appear to fit the picture. The architecture is the dominating note. The composition is an eminently pleasing one, and the figures, in their dark costumes, about to enter the church, harmonize well with the surroundings.

Data:  $3\frac{1}{4}$  x  $4\frac{1}{2}$  Kodak; R. R. lens; U. S. 8; August, 11 A.M.; sunlight; Kodak film; enlarged print on Royal bromide paper.

Mr. Cleveland's composition, page 61, owes its stately beauty to its well-considered proportions. The sense of height of the nearest tree has been thereby greatly increased. Judicious subordination of pictorially unimportant details, by means of technical skill, has simplified the collection of trunks and branches, so that what ordinarily would appear as multitudinous and an almost chaotic mass of detail has been moulded into an harmonious and pleasing whole.

No; this is not Holland, but a bit of old England. Page 62. The view was taken by Mr. Armstrong before the destructive raids of the Zeppelin air-ships. In all probability this interesting feature of a Yorkshire

landscape has escaped unscathed. As a near-silhouette impression, the old mill yields a rather striking effect, and in an exhibition, however large, cannot fail to arrest attention.

Data: 4 x 5 Kodak; Goerz Dagor, 6 $\frac{1}{4}$ -inch focus; F/6.8; December, 5 P.M., just after sunset;  $\frac{1}{30}$  second; film; pyro; enlarged print on Montauk Bromide Buff; enlarged 8 diameters in home-made enlarging-camera not a projection-outfit.

Among a lot of miscellaneous prints of foreign origin, laid away and awaiting no particular time for publication, was one by our old friend, C. J. von Dühren, of Berlin, whom I "discovered" away back in 1902. Like many good portraitists, von Dühren sought diversion by taking his view-camera into the country or into the woods, where he found relief from exacting studio- and darkroom-activities. His "lumbermen" page 70, must have been taken in some forest far from the cultivated neighborhood of Berlin, perhaps in the lumber-district of Pomerania, which furnishes material for the ship-yards of Stettin. Singularly enough, the scene perpetuated by von Dühren—about ten years ago, among peaceful times—suggests storming activities in the forests of Argonne and elsewhere, not many miles either side of the strongly fortified lines that separate two fighting nations of the old world. But the eye would prefer to linger on the less troubled scene, which, in its unaffected simplicity, evinces the instinct of a master-hand.

As a fitting mate, is the sylvan view, page 71. It is an unpretentious but pleasing arrangement in which the interest rises gradually and culminates in a broken sky.

As PHOTO-ERA does not boast a humorous department, served, week after week, regardless of Zeppelin-raids or any other catastrophe, as is our dauntless English contemporary "Photography," it gladly accepts an invitation to print, in this issue, a comic "atrocity" from the pen of the famous artist-poet-photographer, W. R. Bradford, whom PHOTO-ERA was the first among photographic publications to herald unblushingly to the world of studio-proprietors, salon-exhibitors and "camera-friends"! Mr. Bradford needs no introduction from me. He is known to every camera-user in the world, not only as an accomplished artist-photographer, but as a successful humorist with pen and pencil. Sometimes he is serious—when he is in the dentist's chair, or when he does some really hard work, as shown on page 74. Data: Graphic camera; 6-inch Cooke, series II; stop, F/11; exposure, electric flashlamp; Wratten & Wainwright Panchromatic plate; hydro-duratal; enlarged on Instanto matte.

### The Photo-Era Competition

THE competition for experts and advanced workers calling for no special class of subjects, but admitting prints of every species of picture, indiscriminately, consistent with artistic and technical excellence, appears to have met general favor. As stated in the last issue, this competition, designated "Miscellaneous," will be a regular quarterly affair, beginning with February, 1917. It would have been announced for an earlier issue but for the important seasonable subjects planned for the preceding eight months. This long period of preparation will enable every interested worker to reserve any unclassified meritorious subject for this general competition.

The domestic scene, page 76, is superb in conception and treatment. There is nothing to indicate deliberate preparation, so natural and pleasing is the composition in every respect. And yet we know that the author considered well the principles that regulate every well-

ordered work of art, avoiding the pitfalls that beset an effort of this character. The placement and attitude of the figure, the management of the light and accessories and the general technical skill betray the accomplished artist, and give convincing evidence that, of the three successful pictures in this competition, his is really the best. Data: Enlarged from a negative taken with a Century camera; Standard Orthonon plate; Mitchell's Celeritas; exposure, 4 seconds, with lens at stop F/32; enlargement on P. M. C. paper No. 8.

"The Idler," page 81, seems to need no affidavit that the pose of the dozing figure is spontaneous. In any event, the siesta has all the manifestations of reality. The pictorial proportions are as admirable as the technique, and any one disposed to question the truth of the drawing should remember that the focal length of the lens used by the artist is nearly twice the diagonal of the plate. Data: March, 3 P.M.; 3 $\frac{1}{4}$  x 4 $\frac{1}{4}$  Graflex; 9-inch Struss lens; stop, F/5.5; bright, cloudy; 3-time color-screen;  $\frac{3}{16}$  second; Standard Orthonon; Rytol.

A bunch of grapes is usually of the familiar triangular, tapering form, and, as suspended from the vine, offers little variety of presentation except by subjecting it to different ways of lighting. In his version of this subject, page 83, W. S. Davis has departed somewhat from the conventional, and has sought to express a little originality in the pictorial design, in which attempt he has attained a measure of success. The pair of bunches lack the ordinary symmetrical form, and the bloom, presented usually intact and undisturbed, here shows the effect of contact with the elements—rain and wind. The picture is commendably unhackneyed. Data: Taken on an autumn-morning, with sunshine diffused by white cheese-cloth; exposure, 5 seconds; Ilex anastigmat; stop, F/16; 4 x 5 Cramer Isonon; Edinol-hydro; print enlarged on Velours Black.

### The Beginners' Competition

THE little family-group, page 86, is a pleasant subject for contemplation. Mother and daughter, evidently gazing into a blaze on the hearth, may be discussing a subject dear to the hearts of both. Whatever the thoughts of the group, the picture contains the element of unity in sentiment and pictorial design. The treatment is unusually meritorious in its simplicity of arrangement and manner of execution. Data: November, 8 P.M.; 5 x 7 Model XV Conley camera; 8 $\frac{1}{2}$  inch Turner-Reich lens; stop, F/6.8; 10 grains Victor Flash-Powder; Hammer extra plate; three-solution pyro and soda, in tray; Professional Buff Cyko; hand-work done on enlargement, which was subsequently copied.

The winter-study, page 87, is a fair example of the technical ability of E. L. Austen, whose practical articles in these pages have proved instructive and entertaining. With his keen sense of observation, Mr. Austen has been delighted to record the particularly beautiful effect of shadows falling on a sparkling sheet of ice. In this instance, the result suggests aquatic reflections. Data: February, 9.30 A.M.; brilliant light; 4 x 5 Seneca camera; 6 $\frac{1}{2}$ -inch B. & L. R. R. lens; F/8; stop, V. S. 16; exposure,  $\frac{1}{2}$  second; Cramer Crown; diluted M. Q., maker's formula; Azo C hard.

The landscape, as the third prize of this competition, page 88, is artistic in arrangement and treatment, but the author has not yet mastered the art of using a pinhole-camera. Evidently the camera must have vibrated during the exposure. The result is actually "fuzzy"—so much so, indeed, that the canal that he

(Continued on page 100)





# ON THE GROUND-GLASS

WILFRED A. FRENCH



## Reflections as Detectives

How an object may be hidden from view by trees (in foliage), and yet be rendered visible to the eye when reflected in a sheet of nearby water, is shown by the accompanying photograph. Here the house is almost entirely concealed by foliage, and from the viewpoint of the camerist only two windows can be seen, and they are partly hidden. By viewing the image reflected in the water, however, the eye beholds the entire house excepting the small part concealed by the trunk of the tree. This is due to a common law in



REFLECTIONS

DR. R. A. KINGLMAN

optics according to which the angle of reflection is equal to the angle of incidence.

The subjoined sketch is made from an imaginary point at right angles with the line of vision.  $AB$  is the angle of reflection;  $BC$  that of incidence. Were the observer at  $B$ , he would have no difficulty to obtain an unobstructed view of the cottage and, naturally, its complete reflection in the direction of  $D$ . In reality, the observer is at  $C$  — or, rather, slightly above it — which is simply a point of the extended line  $BD$ . In the summer the house is virtually hidden from view.

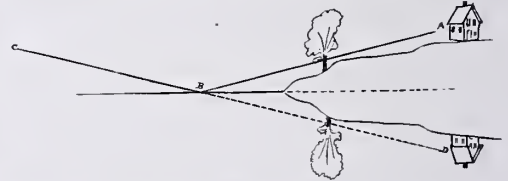
## A Paradox in Moving Pictures

A MOVING picture of a picture that is not moving, i.e., one in which there seems to be neither motion nor emotion, is described by the *Boston Herald* in the following query — “Is it as evidence or novelty that the mayor offers these moving pictures of city-employees hard at work?”

## Photographs of Impossible Feats

AN interested reader thanks the Editor for mentioning the zeal of the illustrated press in presenting photographs of what appear to be impossible athletic and military feats, and wonders how the uninitiated may tell the genuine from the spurious.

This is really a chapter in trick-photography, and a long story in itself. Briefly, it is simply a matter of placing the camera or of making the print. In the case of a jump, the distance between the jumper is increased by photographing from a low level and directing the camera upwards, thus converting a leap of three feet, for instance, into one of five feet or more. In the case of a man, or a group of men, climbing a cliff or the perpendicular side of a mountain, or a troop of cavalry descending a precipice, the print can be trimmed to any



SKETCH ACCOMPANYING ILLUSTRATION OPPOSITE

degree of steepness, or the same effect may be obtained by placing the printing-paper obliquely on the negative. If it were possible to determine the plumbness of the cliff or precipice in the photograph by a plumb-line attached somewhere in the scene and left visible in the print, all might be well; but such an evidence of fact would have a slim chance of escaping the eye of the critical observer.

## Pictorial Photography and Painting

AMONG the prominent artists who call occasionally at the PHOTO-ERA offices to see what there is new and original from pictorial workers is John J. Enncking. It is only during the last few years that this great impressionist has come to appreciate the original creative power of the photo-pictorialist. He has learned to discriminate against the mere technician, and in favor of the artistic interpreter of commonplace themes, or, indeed, of the creator, by direct individual means of art-photographs that are refining and elevating in their influence. After having admired the prize-pictures of the PHOTO-ERA Cover Competition recently, Mr. Enncking declared that he got more stimulating ideas and satisfaction from the work of artist-photographers than from paintings.



# EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication



## Photographers' Association of New England Eighteenth Annual Convention

Copley Hall, Boston, September 12, 13, 14, 1916

THERE has been unavoidable delay in assembling the details for the regular program in time for publication in this issue; but the instructive features to be provided will prove of permanent benefit to all who may be privileged to attend. A copy of the handsome illustrated program-book will be mailed to each member long before the opening of the convention.

Among the special features are the prize-competitions, described below; a practical address by J. A. Dawes, of the Wollensak Optical Company, on the promotion of business for the studio; practical demonstrations in lighting and posing at the Champlain Studios, on the mornings of Tuesday and Wednesday, and an address by Secretary Jno. I. Hoffman, the national secretary.

### A GOLDEN OPPORTUNITY FOR ALL

The comparative apathy shown by makers of good portraits — professional or amateur — in the Grand Portrait Class, a regular feature of the annual convention of the Photographers' Association of New England, in Boston, for the past few years, is probably due to some misunderstanding. This competition is not confined to members of the P. A. of N. E., but is open to *everybody*, regardless of class, sex or nationality. The competition is open to the world!

The entry consists of only one picture, 8 x 10 inches or larger, framed; no entry-fee; it *must be* in the hands of the secretary, George H. Hastings, on or before September 8, and all charges prepaid. The award is a solid-gold medal. The fact that a picture has appeared in PHOTO-ERA is no objection.

Therefore, get busy, ye Ellises, Higgasons, Kilmers and others whose portraits have graced the pages of PHOTO-ERA! The big professional men need no urging.

### A SILVER OPPORTUNITY FOR MEMBERS

The Champlain Trophy Cup, of sterling-silver, gold-lined and ten inches high, will be presented by Orrin Champlain, president of the P. A. of N. E., to the winner of the

#### Best Set of Three Portraits

made on 8 x 10 plates, or smaller, the prints themselves not to exceed 11 x 14 inches.

This competition is open only to members of the P. A. of N. E., and is designed to bring out the ability of the photographer and the approval of his patrons. Therefore, those who exhibit three different subjects, viz., a child, a woman and a man, will receive the greater consideration from the jury. The special points to be considered are:

First, originality of posing and lighting.

Second, attractiveness in style of finish, and general pleasing qualities to make a very salable picture. All prints to be unframed.

### OTHER COMPETITIVE CLASSES

**States' Class:** Portraits only, three pictures, any size. First and second prizes for each state-division of silver and bronze medals — Maritime Provinces, Maine,

New Hampshire, Vermont, Massachusetts, Rhode Island and Connecticut. Competitors are eligible only in the state-class wherein they are members. No picture can be entered in more than one competitive class in any of the above.

**Landscape Class:** Three pictures, any size. Prize, a silver medal.

**Commercial Photography Class:** Three pictures, any size. Prize, a silver medal. Space will be reserved for complimentary exhibits for all who do not care to enter in the competition for prizes.

All exhibits must be in the hands of the committee on or before September 8, and all charges must be prepaid to ensure acceptance. Address, P. A. of N. E., Copley Hall, Boston, Mass.

No exhibitor's name shall appear on the pictures. Each exhibit will be numbered. Names will appear after the awards have been made.

The Association will not be responsible for any loss or damage to pictures in its charge, but special precautions will be taken by the committee to ensure the safe return of all exhibits entrusted to its care.

Have screw-eyes with frames, and wire for hanging. Screw on your box-covers, *do not nail them*, and have return-address on other side of cover, to ensure prompt and safe return-delivery.



THE WOLLENSAK TROPHY-CUP

An artistic copper and silver trophy cup, about 12 inches high, is offered by the Wollensak Optical Company, of Rochester, N. Y., for the best three portraits from negatives made with the aid of Wollensak lenses and exhibited by a member of the New England Association.

The winning prints, or duplicates, are to become the property of the Wollensak Optical Company.

All exhibits for this prize must be sent — all charges prepaid and marked Wollensak Optical Co., in care of George H. Hastings, secretary, Copley Hall, Boston — before September 9, 1916.

### Professional Conventions

P. A. of A.	Cleveland	July 24-29
P. A. of Wisconsin	Milwaukee	Aug. 3-4
North Central P. A.	Des Moines	Aug. 15-17
Missouri Valley P. A.	Lincoln, Neb.	Aug. 22-25
P. A. of N. E.	Boston	Sept. 12-14



## Photo-Era a Reference-Library

(Continued from July issue)

THERE is no better reference-library of photography than that provided by back numbers of PHOTO-ERA. The variety of subjects treated has been great; the writers include the best authorities and most successful practical workers, both professional and amateur, and most of the articles are illustrated. Regular readers who have kept a file of the magazine, or had each volume bound, will find the appended classified lists and those to be published in subsequent issues of value for reference. **Missing copies may be had at 25 cents each as long as the supply lasts.**

### COMMERCIAL WORK

How I Reproduce Broken Ambro- types	L. C. Bishop	Dec., 1915
Photographing for the Photo-En- graver	William S. Bailey	Nov., 1915
Photography for Advertising-Pur- poses	Robert F. Salade	Nov., 1915
The Importance of Working Up Commercial Photographs	Robert F. Salade	Aug., 1915
How to Prevent Halation	Philip Conklin	July, 1915
Black-and-White Reproductions	F. Sherman Vogt	July, 1915
Extremes of Contrast Indoors and Out	George W. Hance	Oct., 1914
Copying Up to Date	E. J. Wall, F. R.P.S.	Feb., 1914
Christmas-Cards	Katherine Bingham	Nov., 1913
Scientific Floral Photography	William S. Rice	Aug., 1913
Selection, Storage and Care of Dry- plates	David J. Cook	July, 1913
Copying and Enlarging for the Ama- teur and Professional Photographer	Kenneth R. Bamford	June, 1913
Systematic Photo-Finishing	Kenneth R. Bamford	April, 1913
On Copying Daguerreotypes	Leslie G. Truso	June, 1910
A Note on Panoramic Work	Fred D. Maisch	May, 1910
Copying Pictures by Photography	William S. Davis	Aug., 1909
Commercial Photography for the Contractor's Needs	John P. Slack	Mar., 1908
Photography and the X-Ray	F. J. Garhell and Mal- colm D. Miller, M.D.	Sept., 1907
A Model Photographic Plant	C. H. Claudy	Aug., 1907
Paper Negatives in the Geological Survey	H. F. Lamb	Aug., 1907
The Camera in Journalism	A. J. Philpott	May, 1907

### PRINTING

The Making of Artistic Printed Borders	William H. Spiller	Oct., 1915
The Rapid Drying of Carbon-Tissue	Paul Lewis Anderson	Aug., 1915
The Bromoil Process for Portraiture	Dr. Emil Meyer	Jan., 1915
A New Direct Carbon Process	J. L. Heinke	Oct., 1913
The Bromide-Gum Process	William S. Davis	Sept., 1913
Some Phases of Pigment Printing. I	Caspar W. Miller, M.D.	June, 1913
Some Phases of Pigment Printing. II	Caspar W. Miller, M.D.	July, 1913
Improvements in the Bromoil Process	Dr. Emil Meyer	May, 1913
Soft Prints from Sharp Negatives	Mrs. C. B. Fletcher	Mar., 1913
Aquarelle Printing	Max Wilcke	Dec., 1912
Pinatype and its Practice	S. Arrhs	Sept., 1912
Bromoil, the Printing-Process of the Future	Dr. Emil Meyer	Aug., 1912
Points on the Making of Gaslight- Paper Prints from Uneven Negat- ives	I. W. Blake	Nov., 1911
Some Notes on Gum-Printing	W. B. Morrison	Sept., 1911
A New Gelatine Pigment Process for Pictorial Workers	Malcolm Arhuthnot	Mar., 1911
The Oil-Process	William H. Kunz	Mar., 1911
A Developer for Black and Brown Tones on Gaslight Papers	D. R. Battles	Nov., 1910
Some Advantages of Steamed Bro- mides	William Findlay	Sept., 1910
Control with Development-Papers	John Sterry	Feb., 1910
The Gum-Platinum Process	Malcolm Arhuthnot	Oct., 1909
Bromide Printing in Two Colors	H. D'Arcy Pugh, M.D.	May, 1909
Latitude in Bromide Work	C. Winthrop Somers- ville, F.R.P.S.	Mar., 1909
Carbon-Effects on P. O. P.	William Findlay	Jan., 1909
Cold Development of Sepia Plati- num Paper	L. C. Bishop	Sept., 1908
Glycerine Methods of Control in Platinum Printing	Madison Phillips	Sept., 1908
Printing-Methods in Their Relation to Pictorial Photography. I	Phil M. Riley	July, 1908
Printing-Methods in Their Relation to Pictorial Photography. II	Phil M. Riley	Aug., 1908
Gum-Bichromate Printing	Eleanor W. Willard	May, 1908

Reducing and Clearing Platinotypes	G. R. Ballance	April, 1908
Preparing a Paper for Sepia Printing with the Salts of Iron and Silver	A. J. Jarman	Mar., 1908
The Oil-Pigment Process	E. O. Hoppe	Dec., 1907
A New Printing-Paper	James Thomson	June, 1907
Economy in Bromide and Gaslight Printing	Rev. Canon A. E. Bloxome Day	April, 1907
Bromide Prints by Contact	T. H. Ferguson	April, 1907
Gum-Bichromate Process	B. F. Langland	April, 1907
Kallitype for Winter-Landscapes	James S. Escott	April, 1907

### LENSES, SHUTTERS AND THEIR USE

Lens Facts and Fallacies	J. A. Dawes	Dec., 1915
Why I Use a Soft-Focus Lens	Charles O. Dexter	June, 1915
Supplementary Lens-Sets and Their Uses	A. E. Swoyer	June, 1915
One Lens for Many Purposes	Phil M. Riley	April, 1915
How to Focus a Hand-Camera	A. H. Beardsley	Feb., 1915
Nature's Camera — The Human Eye	Charles Goosmann, M.D.	Feb., 1915
The Breakage of Condensing-Lenses	Dr. A. Klughardt	Dec., 1914
The Versatility of the Telephoto- Lens. I	A. E. Swoyer	July, 1914
The Versatility of the Telephoto- Lens. II	A. E. Swoyer	Aug., 1914
The Use of Single-Speed Shutters	Arthur Pender	Oct., 1911
Measuring Shutter-Speeds	R. H. Rothham	Sept., 1911
Fine Focusing	F. Dundas Todd	July, 1911
Focal Depths of Lenses	Gaston M. Alves	June, 1911
Aberration and The Swings	C. H. Claudy	June, 1910
The Influence of Aperture	Frank H. Jeffrey	Oct., 1909
A New Lens-Calculator	A. Lockett	Jan., 1909
Shutter-Principles	C. H. Claudy	Nov., 1908
Depth of Focus from the Standpoint of the Pictorialist	George H. Scheer, M.D.	Jan., 1908
The Shutter-Problem	Harry Edwardes	Nov., 1907
A Catechism on Focal Lengths. I	Gaston M. Alves	July, 1907
A Catechism on Focal Lengths. II	Gaston M. Alves	Aug., 1907

### TRAVEL

Photography in the Tropics	H. G. Cornthwaite	Sept., 1915
Photography on Coastwise Steamers	Phil M. Riley	Aug., 1915
The Wild-Flowers of Pike's Peak	Kenneth Hartley	June, 1915
Camera-Work at the Panama-Pacific Exposition	Harold A. Taylor	June, 1915
Camera-Work in the Canadian Wilds	Julian A. Dimock	Dec., 1914
Up the Monarch of the Cascades with a Camera	A. H. Barnes	Sept., 1914
The California I Know	George R. King	May, 1914
My First Trip to Aroostook	William E. Clogston	May, 1914
Camera-Work in Florida	Julian A. Dimock	April, 1914
Foreign Travel	Katherine Bingham	Feb., 1914
American School-Boys' Tour in Europe	James R. Starr	Jan., 1914
A Winter-Vacation in New Hamp- shire	Phil M. Riley	Jan., 1914
Sauntering Around Thun with a Camera	Carine Cadhy	June, 1913
A Camerist in Japan	Harold M. Bennett	May, 1912
Photographing Niagara Falls	William H. Kunz	May, 1912
The Camera Down in Panama	Felix J. Koch	Sept., 1911
A Photographic Tour Through Scot- land	James Paris	July, 1911
Washington, the Mecca of the Pho- tographer	Charles E. Fairman	May, 1911
A Photographic Trip to Ancient Chester	Ernest M. Astle	April, 1911
A Camera-Tour Through Spain	William H. Phillips	Jan., 1911
Picturing Indians with the Camera	Frederic I. Monson	Oct., 1910
The Pictorial Attractions of Boston	Wilfred A. French	Aug., 1910
A Camera-Tour in Switzerland	W. A. Rowley	June, 1910
With a Camera in Beautiful Bavaria	Wilfred A. French	Jan., 1910
I. Nuremberg		Jan., 1910
II. Rothenberg		Feb., 1910
The Photographers' Invasion of Switzerland	Wilfred A. French	May, 1909
Concerning the Joys of a Tropical Sun	Julian A. Dimock	Aug., 1908
Glimpses of Cowboy-Life in Texas	George Pattullo	June, 1908
A Photographic Trip to Alaska	George R. King	May, 1908
What My Camera Did in Capri	Wendell G. Corthall	Dec., 1907
The Photographic Equipment of a Sub-Arctic Exploring-Party	O. von Engeln	Oct., 1907
The Graflex Camera in Porto Rico	Austin K. Hanks	Aug., 1907
With a Camera in the Sierra Nevadas Elmwood (Home of James Russell Lowell)	William S. Rice	July, 1907
By Motor to Mt. Vernon	W. Prentiss Parker	April, 1907
A Photographer's Notes in the Balkans	C. H. Claudy	Mar., 1907
A Photographer's Trip Among the White Mountains	Felix J. Koch	Mar., 1907
	Chester F. Stiles	Jan., 1907

(To be continued)



## BOOK - REVIEWS

*Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices. Send for our list of approved books.*

**THE ANTIQUE GREEK DANCE.** By Maurice Emmanuel. Translated from the French by Harriet Jean Beaulieu. Large 8vo, illustrated with over 600 drawings, after painted and sculptured figures and from life, by A. Collombar and the author. Cloth, \$3.00 net. Postage extra, according to zone. New York: John Lane Company.

The revival of the classical dances of the ancients, or, rather, modern classical dances in the spirit of the ancient Greek form, as introduced to the American stage by the Russian dancers (Anna Pavlowa and her company), has created an interest that is deep and permanent. These terpsichorean artists have studied with zeal and devotion the traditional Greek gestures, as shown by the figures of antique paintings and sculptures preserved in the art-museums of the world. They have used the mechanical means of the ancient dances to express, in pantomime, the spirit of modern classical music, and generally have found the American audiences quite unprepared to appreciate their performances. To do this requires an understanding of the motive, significance and technique of the antique Greek dance, and this end is served by the exhaustive treatise of Maurice Emmanuel, Doctor of Letters, and Laureate of the Conservatory, of Paris.

The courtly dances of the eighteenth century — as illustrated by the minuet — though shallow in sentiment, were at least graceful and refined. But with the elegant costumes of that period passed away the courtly dances, both to be superseded by present-day horrors. Not even a graceful walk or carriage has been left. All gone! "Back to nature!" is the cry; and though the free movements of a flexible body unrestrained by the harness of present-day dress are ill suited to modern tastes and environment, and to adopt them — even in a tentative way — would be to court the ridicule of an unsympathetic public and, perhaps, a punitive fate at the hands of the police-authorities, they should, at least, be encouraged in the form of stage-representations or open-air pageants.

Already one observes the favorable influences of the refined performances of classical dances — as exemplified by the Russian ballet — in a certain phase of dress-reform, and the study of this extremely interesting and welcome topic has engaged the attention of many thinking and broad-minded persons. Pageants, historical, mythological and allegorical, are the fashion, and here the element of graceful action by the participants is of the utmost importance.

An insight into the origin of the antique Greek dance, which is an expressive language rather than a succession of elegant poses and beautiful movements, would seem to commend itself to every one interested in the classic dance of the early Greeks, which is superior to our conception of the exercise in that it addresses the mind as well as the eye. Though the mechanism may be inferior to ours, it far surpasses ours in dramatic value, and is wholly devoid of the immoral suggestions that frequently characterize the modern dance.

Every woman ambitious to acquire grace in carriage and movement, which is a rare accomplishment nowadays, excepting on the stage, will derive immeasurable benefit from a perusal of Mr. Emmanuel's instructive work with its numerous illustrations.

### Color-Photography at Its Best

As adventurers are busy exploiting pretentious but barren color-photography cameras and Metol-substitutes, the autochrome, the only exemplification of true color-photography, is quietly making new devotees.

During the warm and trying month of July the Editors were favored with an opportunity to admire a collection of autochromes, lent by that accomplished autochromist, Miss Henrietta Hudson, of New York. Among the many connoisseurs who gazed at these glowing works of art with genuine delight were several Boston publishers and painters. It was generally agreed that the untrue and lifeless color-prints distributed by unscrupulous manufacturers of fraudulent outfits are a libel on the glorious science of color-photography, and that a discriminating public recognized well-executed autochromes, as those by Miss Hudson, as the best that color-photography has yet achieved.

Among the most strikingly successful and beautiful plates of Miss Hudson's collection were those portraying soap-bubbles. The honor to be the first to have accomplished the rare feat of fixing a soap-bubble on an autochrome plate belongs to Miss Hudson, who, as long ago as last spring, made her first experiment with these interesting subjects. Her letter explaining her method of procedure is quoted below.

Other remarkably truthful and artistic plates were a dish of black cherries — luscious and tempting; a rare black onyx, and a monstrous pendant, wonderfully resplendent and transparent, from Tiffany's; a group of orchids in their own delicate tints; several flower-groups, and other subjects of still-life, as well as outdoor-scenes, flower-gardens, wood-interiors and landscapes. Most of the exquisite interiors were made with the aid of tungsten and nitrogen lamps.

Miss Hudson is now working on a process of her own, that of printing her autochrome plates in correct colors on rough artistic paper — so comparatively simple and inexpensive that photographers can print off as many paper duplicates of their autochromes as they wish, a couple of dozen, more or less, in one short session.

Miss Hudson very courteously has furnished us with her method of procedure, which is all her own, and with her consent it is published herewith.

"The requisites are a sheet of absorbent cotton, a small-mouthed vase or bowl dipped into bubble solution and placed on the cotton. A bubble is gently blown upon the mouth of the vase or bowl under cover of a bell-glass. One of the bubbles portrayed by the autochrome was taken for Mr. R. J. Fitzsimons, the Lumière agent, and lived for two hours and thirty minutes. The other, taken for Mr. Louis Tiffany, lived in his open studio ten minutes, uncovered; and in her own laboratory Miss Hudson carried a bubble from one window to the other for a sunlight-exposure, and it lived fifteen minutes, uncovered.

"Naturally, under such conditions it was not too difficult to photograph, as the exposure with lens at F/4.5 was only 45 seconds."

### A Studio-Costume

"I 'm going to have my picture taken, and want a pretty waist."

"How do you want it made?"

"In this new style. I want it to look as if it were about to drop off; but of course it must n't."—*Exchange.*





THE outside photographic public has been wondering about the London Photographic Salon's fate this year. The Royal Photographic Society has already announced its forthcoming exhibition this autumn, but there is yet no official news of the Salon's prospects. The committee will very shortly make its plans known, however, and the same gallery in Pall Mall East has been engaged, and the exhibition will be held at nearly the same date as last year.

The delay in sending out notices has been caused by the illness of that energetic driving-force, Mr. F. J. Mortimer. He virtually carried the whole thing through last year, and made not only a photographic success of it, but a financial one as well, and had a considerable sum to hand over to war-funds. Mr. Bertram Park, the former secretary, is now so taken up with his professional work that he has resigned his post, and Mr. Mortimer is acting secretary as well as general manager. At present he is away in the country by doctor's orders, but is expected back in London in a few days, when things will probably begin to move again — if not at quite the pace he usually sets, at least as fast as he can push them in war-time. Delays are some of the unpleasant things to which we have to accustom ourselves nowadays. Everything is considered unimportant beside war-work, so there is much weary waiting. No doubt it is good discipline for the impatient. There was much delay, we hear, over the gallery-arrangements, as it was thought more important that the permanent secretary, through whom the business had always been done, should join the forces than stop to finish it.

We do not know whether many photographers attended the Great War-Fair at the Caledonian Market for the Wounded Allies' Relief Fund on June 6 and 7. We think that there must have been some, for the photographic materials that were put up at auction raised some lively bidding, and, certainly, some of the things kept up the Fair's reputation for offering real bargains. We saw lenses, developing-dishes, dark slides (plateholders) and even a studio-camera with a very antiquated tripod held up to view. Probably there were photographers present, because every one was there. The whole of London Society turned out on both days as sellers at the stalls, and also as buyers. The whole of the East End seemed to have attended as well, and it certainly was an unforgettable scene — East meeting West like this, and surging in close mobs around the stalls. It was over too big an area, and the crowd was too thick to be able to move about much, that one only longed for a good photograph taken from an aeroplane. Rumor has it that when Arnold Bennett asked Lady Paget if she would help, she begged for assurance that it should be a success, as she was not accustomed to being connected with failure. His answer was, "Well, Lady Paget, I have n't been connected with many failures myself!"

News in photography not connected with the war is scarce over here now; but there is always one subject pretty sure to interest readers, and *The Amateur Photographer* is wise to fall back on it. We are speaking of the interviews of leading photographers who have become professionals and who are making a success of turning their talent to a practical account. Making photography pay is always rather an attractive subject, and we enjoy hearing of these men we knew as amateurs now coming face to face with the general and often unsympathetic public. *The Amateur Photographer*

has already taken us to the studios of Mr. Park and Mr. Arbuthnot, and we are promised visits to Mr. Hugh Cecil and Mr. Sherrel Shell. The latter is a clever American who has been in London a few years now, and is known to people in general mostly for his excellent portrait of Rupert Brook, the young poet who died at Lemnos.

With the prohibition of the use of platinum for photographic purposes, photographers who printed usually in that fascinating process, like many other people in other industries, have had to find substitutes. "Satista," made by the Platinotype Company, and still procurable, is perhaps the nearest approach to platinum paper, and its characteristics have been dealt with in these notes, some months back. But there is no doubt that the use of bromide paper has been much stimulated by the scarcity of platinum, and if the grade of paper is carefully chosen to suit the negative, effects quite equal to platinum can be obtained. Indeed, when aiming at extra delicate results, bromide enlarging by daylight cannot be rivaled by any other process. At least, this is our personal experience. Its chief drawback seems to lie in the inevitable curl that the prints assume when multiple mounting is adopted, and the prints are fastened by the edge only. This has brought many of us to face dry mounting, an easy and satisfactory way out of the difficulty if only a little care is exercised. The method is to mount the print with a piece of dry-mounting tissue on the *first narrow border*. This can then be stuck on to the larger mount with paste in the ordinary way by the edge, and it *does not curl*. For sizes up to whole plate (6½ x 8½), an ordinary hot iron, as hot as used by the laundress, works admirably, and no special apparatus seems necessary.

An exhibition of art-pictures of the war, by M. Sampson Tchernoff, has been opened at the Royal Institute Galleries (Piccadilly) by the Grand Duke Michael. A great many of the prints are photographs, and, although realistic representations of war-scenes, they are true to life and line and color. Such subjects can be really better treated by a clever photographer than by a draughtsman, unless, of course, the latter is a genius. This is demonstrated in almost every issue of the weekly illustrated press, where we see full-page drawings ("done from the notes and information of an eye-witness") that are absolutely unconvincing, and often vulgar in conception, as when the dead and dying are drawn without sympathy or restraint. And alongside these pretentious pictures (and we get them both of naval- and land-warfare), we come on some small prints, reproductions probably of photographic snapshots, that by the true and faithful rendering of a gesture or expression tell us the actual facts without any trimmings. The lens tells the unvarnished tale of devastation, and will lift the curtain, and suggest to us even the expression and the attitude of mind of the combatants; and its straightforward, simple statement often carries with it a world of pathos.

### The Camera Club of Detroit

At the recent annual meeting the following officers were elected: Otto H. Linstead, president; Cecil H. Taylor, vice-president; Philip M. C. Armstrong, secretary-treasurer; Dr. Oscar E. Fischer and Herman Gabriel, board-members at large.

A program of events has been arranged for the summer and autumn months, including several lectures, club-outings and other entertainments. An open competition to be held in the autumn will be announced later. Judging by the merit of the annual exhibition, this promises to be of exceeding interest.



## WITH THE TRADE



### Kathol, the Developer of the Hour

NOT since 1907, when the autochrome was introduced commercially, has there been so much agitation in the photographic trade in this country as at the present time, in consequence of the general search for a satisfactory Metol substitute. The almost universal shortage of Metol, the most popular developer for gaslight or bromide papers—except in Germany, the country of its origin and manufacture—has stimulated chemists and pseudo-chemists, indiscriminately, to invent a compound that shall take its place. The mixtures that have been put forward, under various trade-names, ever since Metol rose to \$50 a pound or became virtually unobtainable, number a score or more. Most of them have proved woefully inadequate, and consisted principally of cane-sugar, starch and Glauber salts. Most of these so-called Metol substitutes required a hydrochinone formula which was found would work equally well *with and without the metol substitute*. This was a fraud on the face of it, as consumers were paying an exorbitant price for an article the addition of which seemed to have no effect on the action or results, and, naturally, prejudiced the photographers' minds against the few really excellent reducing-agents, chief among which is Kathol.

Kathol is an acid salt prepared from nitro-benzine by an electrolytic process, and is to be used with any standard developing-formula that includes sodium carbonate, sulphite, bromide and hydrochinone (or pyro), substituting Kathol for Metol or any Metol equivalent.

Kathol is really an equivalent of Metol, and does not even need to be better, as some enthusiasts declare, in order to maintain itself and to win high praise for its inventor, Dr. C. J. Thatcher, president of the Kathol Manufacturing Company, New York. To quote Dr. Thatcher: "The Kathol developer solutions for all purposes are made in the usual manner and proportions, merely substituting Kathol for Metol, and then adding a sufficient quantity of a sodium hydroxide (caustic soda) solution to make the speed of development the same or nearly the same as that obtained with Metol under the same conditions. After this quantity has been once determined by tests with that particular formula, it is always added afterwards in the same amount. When the development begins to slow down somewhat, and becomes too slow, a little more sodium hydroxide solution is added, which speeds up the development again. This can be done several times and with the result that, as compared with Metol, more satisfactory work can be obtained with the same quantity of solution and of Kathol. The sodium hydroxide not only affects the speed of development but also the photographic results, giving more brilliancy and greater detail. The sodium hydroxide, therefore, is really a decided advantage, and in the very small amounts in which it is used has never yet injuriously affected the bases or sensitized coatings."

Dr. Thatcher is a chemical expert of high reputation, and studied chemistry in Germany. He was graduated from the University of Leipzig in 1903 and received the degree of Ph.D. Since then he has served in the capacity of consulting chemical expert to many large corporations, and kept in touch with the chemical advances in

photographic science. When it became evident, after the beginning of the European war, that certain photographic chemicals—Metol in particular—could no longer be imported from Germany, he devoted his talents to the production of a reducing-agent that would have the characteristics of Metol, require no change of formula, be much cheaper and yet yield photographic results similar to Metol. The result was Kathol. For this invention Dr. Thatcher was granted a patent by the U. S. Patent Office last November.

Our personal experience with Kathol is very favorable. As a developing-solution it changes color as it oxidizes, but this does not affect its action or cause stain. Indeed, color really means nothing; usually it is caused by mere traces of impurities which are inert. Kathol is, in fact, a fine all-round developer, but is pre-eminently suitable for gaslight and bromide papers, yielding results quite equal to those produced with Metol; although some expert photo-finishers say, even better. Kathol will go farther than Metol, and it is declared that, with these sterling merits, it will prove a strong rival to Metol when that commodity shall again be found on the shelves of the photographic dealer.

At this writing Kathol is sold at prices considerably less than Metol or equivalents, and is an economical commodity; but as the cost of production decreases Kathol will be lower in price, and dealers will be duly notified of such changes.

The Kathol Company will have an exhibit and demonstrations of its product at the Cleveland National Convention, and satisfy the trade and the craft that Kathol is eminently worthy of their confidence.

### Burke & James' New Developers

YIELDING to the demand for special developers, Burke & James, Inc., of Chicago, have introduced two excellent preparations. One, Monogallic Acid, is a rapid and powerful developing-agent for Rexo and similar gaslight papers. The other, Diagallic Acid, acts similarly on plates and films. Burke & James recommend these specialties confidently to the workers, generally, and guarantee their purity and excellence.

### Westward Travel Disappointing

WHATEVER the reasons, travel to our great garden-spots, national parks and mountain-scenery in the great West, made familiar through illustrated lectures, magazine-articles and the familiar slogan, "See America First!" is slack this year. No doubt one of the reasons is the great expense to reach and admire those great nature-spectacles. Another, money is needed for other luxuries and necessities, such as automobiles and their costly upkeep.

Besides, persons eager to travel, and who live east of the Great Divide, may do so most profitably by seeing what the Great East has to offer—its mountain-ranges and hills, beautiful though not stupendous; its historic landmarks and associations; its cool, calm and convenient retreats in the mountains and at the seashore, and its unlimited and varied camera-material. In these respects New England is preëminent.

Any one interested should procure a set of illustrated booklets (with map, hotels, boarding-houses and rates), sent free on application to Room 15, North Station, Boston, Mass.



## Our Illustrations

(Continued from page 93)

has been trying to depict resembles a curving road, and what look like shadows are in reality reflections. The picture narrowly escaped being one of atmospheric charm. Data: May 1, 1.30 P.M.; bright light; 4 x 5 Hawk-Eye camera, plate attachment; 8-inch Pinhole No. 6; 2 K. Wratten color-screen; exposure, 1 minute; Central Pan-Ortho; Rodinal in tank; Cyko semi-matte.

The landscape with sheep, page 79, used to illustrate Miss Bingham's analysis of this month's competition, is a masterly composition, indeed! The usual remark made by a jealous worker is, "Oh, well; he's got the subject and the scenery," meaning that the Europeans have superior pictorial advantages. In many cases that is true; but, on the other hand, this country has scenery and subjects that are the envy of European workers. That fact should be remembered. But the scenery will not come to you, therefore you must go where it is. A flock of sheep is not a rarity in the United States, not even in the East. And it must not be forgotten that these European photographers go to infinite pains to get what they want. Mr. Walmsley, the author of "A Lonely Valley," is a professional artist-photographer, of Ambleside, in the famous English lake-district. This picture is one of a series of fifty or more which he made to interpret the spirit of Wordsworth's poetry, and all of these photographs are said to be remarkably successful. If this does not speak volumes in favor of the camera as an effective means of artistic expression, nothing can. No data.

### Steadman's New Aabameter a Winner

F. M. STEADMAN'S "Unit Photography," that lucid explanation of the secret of exposure, is well known to most readers of PHOTO-ERA. Its principles have now been applied to the Aabameter, the neatest, most compact little nickel-plated pocket-actinometer of American manufacture yet placed upon the market. No man speaks with greater authority on the subject of exposure than Mr. Steadman, and his new device is so attractive that merit and appearance should win for it a phenomenal sale. By its use every exposure will be successful, and with dryplates and chemicals at their present high prices will pay for itself many times over in material saved within a few weeks. Unlike any other actinometer the light reflected from the subject itself is measured and the sensitive paper refills are in the form of tiny rolls from which the paper is unwound from the meter in a narrow strip and torn off after use.

### Flashlights for Summer-Evenings

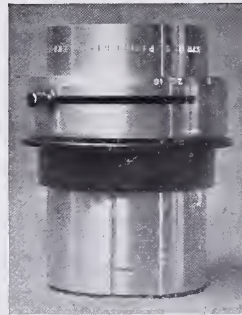
THERE is no limit to the amount and variety of entertainment one may have with the camera these summer-evenings, aided by a handy and efficient flashlight-device. There will be charades, private theatricals and costume-parties, of which everybody wants a souvenir-photograph. Summer-camps, after dark, also furnish interesting subjects for flashlight snapshots. These are some of the many opportunities in the country and at the seashore of which the camera-user will be called upon to make personal records. For this work, and also for animal-photography at night, the Imp Flashlite Gun will be found simple, handy and reliable—in fact, an ideal flashlight-outfit. Its range of efficiency is remarkable, and is demonstrated convincingly in the illustrated booklet just issued by the makers—the Imperial Brass Mfg. Co., 1200 West Harrison Street, Chicago. It will be mailed free to any one upon request.

## The Gennert Catalogs

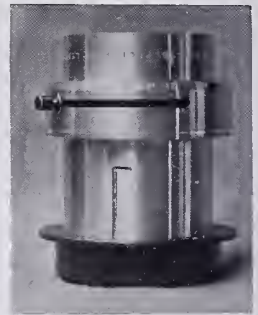
G. GENNERT, 24 East 13th Street, New York City, has just issued for distribution on request two important catalogs. The first of these is devoted to that notable line of British-made Ensign cameras and Ensign film, both of which have achieved an enviable popularity in America. The other is the general catalog of photographic apparatus and supplies, including Imperial dryplates, Montauk lenses, cameras, bromide papers, chemicals and various accessories, Colona developing-paper and a big section devoted to motion-picture cameras, projecting-apparatus and supplies.

### Struss Lenses for Reflecting-Cameras

OWING to the demand for an inexpensive soft-focus lens especially adapted for use in cameras of the reflecting-type, the Struss Pictorial Lens is now being made in a new and improved mount which permits the lens to be used in two different positions—set in or out. It closes up in the camera when set in and may be used in that position when there is sufficient bellows-



SET IN



SET OUT

extension. If desirable, however, it may be set out for use when additional distance from the plate is required on account of the relative shortness of the bellows when photographing very nearby objects. An extension-tube may be had for short-bellows cameras. Send to Karl Struss, 5 West 31st Street, New York City, for a circular giving dimensions and prices.

### Willoughby's Metol Substitute

WILLOUGHBY, the energetic and conscientious dealer, he of the familiar Square Deal, has adopted "Duital" as his "one best bet" for a reliable and moderate-priced Metol substitute. It is frankly announced as a universal developer, being equally desirable for films and development-papers.

A sample of Duital came to this office about July 1, was tested by a prominent Boston photo-finisher and pronounced by him "the best yet!"

### Snow White

It is always a source of the utmost satisfaction when a manufacturer's most extravagant claims for his product are fully justified. This is the case with Snow White, a new watercolor pigment made in the U. S. A. Painters, designers, illustrators, engravers and photographers are speaking of it with enthusiasm because of its unique and desirable qualities. It is a true white which will cover the desired surface in one coat, flowing readily, drying quickly and leaving an opaque surface that will not rub off.

SEPTEMBER

1916

15 CENTS

# PHOTO-ERA

The American Journal of Photography





# ANSCO

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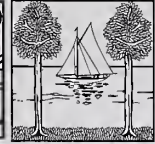
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Get an AnSCO 1916 Catalog from the AnSCO dealer near you or write to us for one and specimen picture on Cyko Paper made with this camera.



ANSCO COMPANY BINGHAMTON, NEW YORK



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ALCHEMY — A PINCH OF DROSS, A LUMP OF GOLD  
F. A. WALTER



# PHOTO-ERA

The American Journal of Photography

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Vol. XXXVII

SEPTEMBER, 1916

No. 3

## Every Day With the Commercial Photographer

F. A. WALTER

**N**OW frequently does one hear the remark, "It is all in the day's work," the expected and the unexpected. The average things are accepted as a matter of course, the unusual things trying our resources and methods. To the photographer "in all its branches" the most certain and most simple method of producing a high average of quality without failure is welcome. First principles, free of all the "isms," and the tried and proved, are the formulas that come with the plates. After all the experiments, their confusion and resultant disappointments, it is first principles, the given formulas, that offer the means of attaining the standard of quality in our average negatives, of our best negatives — a mental standard which we have established and seek for each new subject.

As to doing the average thing, the operator has the choice of depending on his judgment and accuracy, or of availing himself of the, to a large extent, mechanical means at his disposal. If a given number of landscape-views is to be made — near views, distant views, white buildings with green foliage, red buildings with green foliage — it is a question if the operator, timing each individual subject differently, would secure more uniform results as a whole than to depend on a predetermined plan of, say, F/45 and an automatic shutter-exposure of one second. The shadows in each of these subjects are about the same; the latitude of the plate is considerable. Of the two methods, if a normal developer is used on the automatic exposures, their uniformity should be good.

However, the average subjects are readily disposed of; it is the unusual subject, requiring special treatment, and coming along at a time with other things, that presents a problem, not alone in respect to exposure, but development as well. For such things to be done in a practical way, taking advantage of the one chance as it presents itself, a developer lending itself to modi-

fication is essential. Pyro is unquestionably the most suitable, the one simple dodge of reducing the carbonate producing surprising results in both over- and underexposure — a seeming contradiction in itself. In the case of over-timed plates, this modification permits the exposure to do the developing, so to speak, rather than force the density otherwise. With underexposures, it gives the shadows a chance to develop gradually before the highlights have reached full density. This scheme may be carried to the extreme of reducing the carbonate to a single drop, with a correspondingly increased time of development. To the other extreme for contrasty results, the carbonate may be increased and the concentrated developer used without danger of chemical fog. To accentuate this the addition of old developer will help, adding both color and density. If control is a feature — and as a rule it is desirable — pyro also furnishes the means: normal for the average, modified for the unusual subject, and it is simple.

The accompanying illustrations are shown because of their range in lighting and exposure. The picture of the young lady at the forge was made by combined daylight and flash. One-quarter of the amount of flash-powder that could be put on a ten-cent piece was put in an electric spark-lamp, and the lamp and wire concealed. The daylight was from an overhead skylight; exposure, one second, at F/7.7, with a double anastigmat of 10½-inch focus, on an 8 x 10 Standard Imperial portrait plate. In the pyro developer the carbonate was reduced to ¼ ounce, the total time being about ten minutes. In using such a small amount of flash-powder consideration was given to the fact that the young lady has eyesight and desires to retain it. Flash-powder is safe if used properly. The picture of a New England window is on the same principle of exposure and development. To photograph a window with the sun shining through it sounds difficult, but to photograph the sunlight in the win-





A NEW ENGLAND WINDOW

F. A. WALTER

dow is not. The flash was behind the camera, the same plate was employed and the same lens was used at F/16 with a bulb-exposure of about one second. We do not care for this, as the eye never sees such solid blacks. The vetch pasture was given a normal exposure of  $\frac{1}{16}$  second at F/16, normal developer. The interior was made with a 7-inch wide-angle lens at F/16, 30 seconds' exposure, normal developer. The school group was photographed on a 12 x 20 Seed 30 plate at F/64, one second exposure. The developer had increased sulphite and reduced carbonate, the object being softness, as some of the figures were in shadow.

Referring to the purpose of these illustrations, as stated above — line lighting, photographing against the light, plain flat lighting, subjects partly in the sun and partly in the shadow — the

one element going a long way in making such pictures a success is the developer. The latitude and possible modifications of pyro are its own testimonial.

✎

JOHN MITCHELL says: It is not work itself, but the spirit in which the work is accepted and performed that ennobles the worker. I do not believe that man was put upon this earth for no better purpose than ceaselessly to repeat the same simple, uniform operation. The principal element which gives labor its dignity and ennobling quality is its voluntary character. The greater the initiative and the more complete the independence of the worker, the greater the pleasure in his work and the more educating and ennobling it becomes.



A HIGH AVERAGE QUALITY OF LAMB-CHOPS  
IN THE SPIRIT OF '76  
F. A. WALTER







\$1.50 EACH, DEVELOPER, ENTERPRISE, COURTESY, ATTENTION UNDILUTED

F. A. WALTER

## Rich Colors in Sulphide Toning

HARRISON FORDHAM

**W**HEN the sulphide toning-process works at its best, it is far and away the best means of making sepia prints, as it is also the easiest; but when it does not, it is capable of giving the nastiest yellow-brown pictures imaginable. Since the following method has been adopted, I have lost no prints from bad color.

It is generally agreed that the bromide print or enlargement which is to be sulphide-toned should be fully developed. The formula given with the paper includes only the merest trace of potassium bromide; since if more were recommended there would be a risk of getting prints of a rusty greenish-brown instead of a pure black. Such a formula, however, is apt to give fog if the development is continued very far. For sulphide toning, the greenish-brown prints just described give a color every bit as good as a fine black print, so a little excess of bromide is unimportant, while it helps to keep the whites clean.

I therefore use an amidol developer containing in each ounce two grains of amidol, thirty grains of sodium sulphite and one grain of potassium bromide, mixed up on the day of use. The development is carried on to the full extent with this,

so as to get a rich deep print, of a greenish-black. With correct exposure, there need be no fear of overdevelopment, even if the action is carried on after the picture seems fully out for, say, half as long again. A plain fixing-bath and thorough washing leave the print ready for toning.

It is bleached in a solution made by adding an ounce of a ten-percent potassium bichromate solution to a solution of one ounce of common salt in half a pint of water, and then adding two drams of strong sulphuric acid. When the print is fully bleached, it is washed in a few changes of water until most of the bichromate stain has vanished. It is not necessary to go on washing until all the yellowness has gone, as the last traces will disappear in the subsequent operations.

To darken the bleached print, I make up a solution of ten grains of sodium sulphide in half a pint of water. The sulphide solution is freshly made as required, and just before use has added to it ten drops of strong hydrochloric acid. Such a solution smells very strongly, but that seems to be its only objection. It acts quickly, and does not seem to soften the gelatine appreciably. The usual washing completes the process.

*Photography and Focus.*

# A Whiff From the Violet-Patch

SIGISMUND BLUMANN



It is a gray day. Silence hangs on the skirts of Nature like a fearsome child to its mother. The humid air comes in through my open window, and with it the scents of the garden; but insinuatingly rather than with insistence the violets make themselves known.

Now why should this gloomy environment and the smell of the violets take me back a quarter of a century and send me to a high shelf of my locker to resurrect the old Bull's-eye camera? Why do I sit with it on my lap and pensively work the obsolete shutter? I am not ordinarily a sentimental fellow. Yet the moist air, the violets' fragrance and this old box hold me. My album, filled with the circular pictures of those times when I was young and the film was an innovation, tells the reason. Here are prints of happy hours, of dear ones, of one especially dear who is not with me now. Trees for a background and at foot a bed of violets. The garden was my gallery. Here I posed whomever would stand for me; and here, as I snapped film after film, the little blue flowers wrought tablets on my memory that endure as I endure.

But what impresses my more subjective self is this: I might be mooning hours away under a somber sky, smelling violets for hours, dreaming hours away without a definite enjoyment of the most precious moods our finer nature allows, were it not for the material thing to put my dreams into substance — pictures to crystallize my fancies. It may be an anticlimax, a sudden leap from poesy to mercenary connections, to speak in gratitude of millionaire Eastman and his eighty-million-dollar corporation; but I feel that way about it and so speak.

I would never have made my first picture had it been imperative for me to load plateholders, develop my own films and do anything but snap the shutter. Why, when I began, the man who sold me the roll of film loaded the camera for me, developed the exposed roll, made prints and handed everything over to me with patient advice as to what faults of exposure needed correction in future. All the pleasures I have, have had and shall have from photography would not be mine were it not for the man who invented the phrase "You press the button, we do the rest." Back of the advertising-slogan came goods of real merit, pioneering in equipment and material and service. And I am grateful. What the Eastman people are doing now interests me little.

I use plates, develop them and use any old paper that appeals for the time being or is nearest at hand. But at that I notice my plate-camera has the Eastman label, and most of my materials are marked E. K.

Be assured that I am not on the Eastman payroll. Photography is to me pure pleasure, and I pay for it, plentifully and willingly. This is written because the whim came to me that behind his armor of gold, isolated from the multitude whose interests and enjoyments he has influenced so greatly by a wall of twenty-dollar gold pieces, papered with yellow-backs and bonds, sits a man who deserves a word in history, and some of our better feeling, though he may never know or care that it is accorded him. I hope that he treasures the first coin his connection with photography made for him as I do the first picture his Kodak gave me. And I wonder if he ever goes afield, even in an 80 H. P. machine, with a Kodak, and comes home all excited to see under the red lamp what he has trapped. If he is too old or too rich for that, then I thank him again, and wish him welcome doubly to all he has made; but I should n't, honestly I would n't, give my forty-four year old boyhood and the fun of taking and making pictures, and of enjoying old prints and memories bred of them, for anything he has.

As things go I am pretty poor, yet rich withal; for under this leaden sky, smelling dank earth and flowers, with an old Bull's-eye in my hands, and pages of pictures made twenty-five years ago, I am so human as to be brother to millions of my kind. I am simple, and to such Nature has much to say in her sweetest, gentlest voice. And I repeat, I am grateful.



A GREAT writer on art once said that no picture could be truly great unless it included some suggestion of humanity, in the form either of a figure or of some work of man. This statement, however, seems to be an exaggeration, and largely an expression of personal feeling rather than of opinion, the fact being that for some observers such a suggestion is necessary to the fullest arousal of the emotions, whereas, for others, pure landscape may be equally impressive. Therefore, the worker is advised to introduce figures only if he himself feels the need of them, and to have confidence that he may reach the highest possible expression, even without such an addition.— *Paul Lewis Anderson.*





THE BOWING ARCH  
STEEL-LACE  
WILLIAM S. DAVIS



# Bridges as Pictorial Subjects

WILLIAM S. DAVIS

**F**ROM the dawn of history to the present day bridges have shared with highways the romance of travel and adventure, while events which changed the history of nations have sometimes depended upon their strategic position. Little wonder, then, that the varied associations gathered about many of the older bridges should render them objects of interest to the ordinary observer, and a theme for song and story, while their many forms in combination with the local setting present attractive possibilities to the artist.

When bridges were first constructed history does not tell, but in all probability they were evolved gradually from the primitive "stepping-stones" placed in the bed of shallow streams to

enable individuals to get across without wading — the next improvement being to lay fallen logs or rough planks from stone to stone, which some early builder, more imaginative than his predecessors, finally thought to make more secure and convenient by piling the stones into piers and adding a wider footway of rough-hewn timbers or large flat stones. Bridges of this type were known to the Greeks and early Egyptians, as well as those composed of several boats moored together. But apparently the first arched bridge of masonry was the Ponto de Rotto, or "Senators' Bridge," constructed by a Roman builder in 127 B.C., though it is quite possible that even this was antedated by the Chinese in some of their early structures; but it is often impossible to verify dates. Stone or wood continued to be the

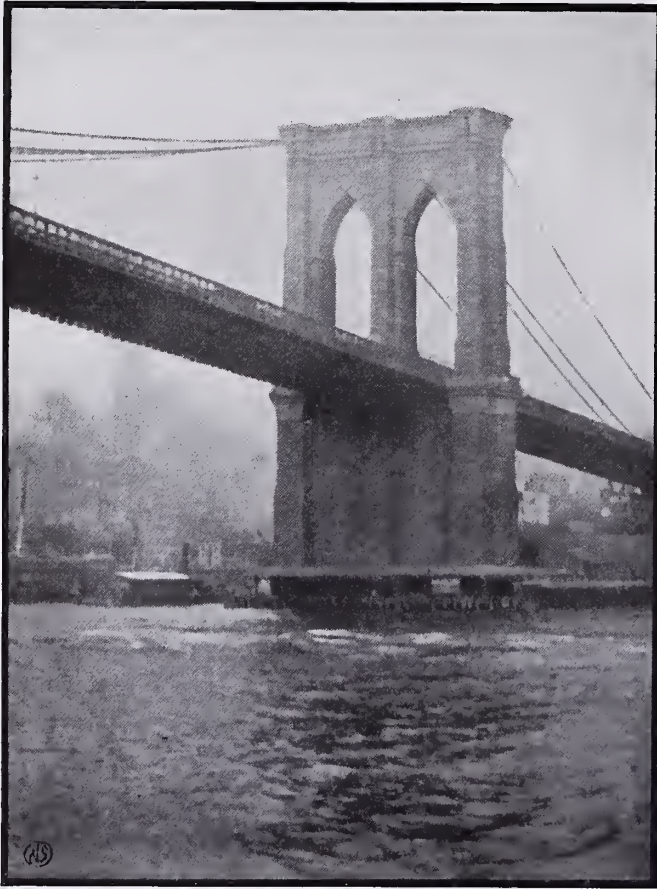
material employed until the latter part of the eighteenth century, when an English engineer introduced cast iron in the work. Later the commercial use of wrought steel made possible some of the greatest achievements of modern structural engineering, including such notable examples as the great Forth Bridge, a cantilever type, over the Frith of Forth in Scotland; the cable suspension-bridges around New York, and the Hell Gate Bridge, now under construction, which contains the greatest arch-span in the world. This, together with several smaller spans and concrete approaches to take the four elevated tracks, forms a chain ten miles long, permitting the freight and passenger traffic of Long Island and New England to go all over the country without transfer. One might go on and mention sliding, draw, lift, Japanese and many others; but an enumeration of all types of bridge-construction would result only in a semi-technical dissertation rather than some suggestions about the possibilities from a pictorial standpoint, which is the object in mind. Therefore I



THE LITTLE FOOT-BRIDGE

WILLIAM S. DAVIS





THE BRIDGE-TOWER

WILLIAM S. DAVIS

will add only that the size of the structure does not determine its relative pictorial importance, and while a gigantic span is certainly impressive and highly interesting to look at, a picturesque little foot-bridge possesses a distinctive charm all its own. Success in treatment, then, lies in interpreting the characteristics of each, and making the most of the subject by effective disposition of line and tone-masses within the picture-space.

The setting, as well as the structure itself, will influence one as regards the arrangement of parts and the relative space allotted to the bridge in the composition—whether it is desirable to show the whole or only a portion, and in what position—for there are so many ways of utilizing the material that it becomes an individual matter in each instance, making any attempt at giving general advice unsatisfactory. Such being the case, some comments and explanations about the illustrations may prove more helpful and suggestive; for while no claim is made that they

show all the principal types of construction, I have tried to select such as would indicate some of the varied treatment in composition that is possible.

Taking, to start with, "The Bridge-Tower," this, as well as some of the other illustrations, indicates the use of only a small portion of the subject in the composition, often desirable (and sometimes the only thing possible) when dealing with a large bridge such as this, which most of my readers will no doubt recognize as the original "Brooklyn Bridge," the first of the great suspension-types built across the East River. As showing the desirability of suggesting height and massiveness in order to convey a characteristic impression of its appearance, I may say that the two masonry towers rise 278 feet above the river, while the floor at the towers is 119 feet, increasing to 135 feet clearance above the water at the center of the span. To gain the clearest impression of the size it must be seen in perspective from below, while the massive bulk of either tower is best realized when the atmospheric conditions and lighting are such as to isolate the structure somewhat from its environment. These conditions

were met at the time this picture was photographed, the exposure being made from a steamer's deck one morning during a fog, which, while giving a suggestive glimpse of the Manhattan sky-scrapers, produced the necessary differentiation of tone to emphasize the mass of the bridge.

Since the massing of tones into a few simple forms adds to the dignity and impressiveness of a composition, the silhouetting of large objects in dark masses against the sky, or other light background, is frequently effective, provided, of course, that the outlines break the divisions of tone into agreeable shapes. "High Bridge" and "Under Construction" are specimens of this style of tonal arrangement. High Bridge takes the original Croton Aqueduct across the Harlem into New York, and consists of fourteen stone arches of Romanesque form. In the illustration, which shows the easterly end, the upward slant of the cliff at the right serves to balance in an unsymmetrical manner the arches in perspective,

while the wedge of land seen beyond makes each opening a different size and shape. To pull the entire composition together, though, it was necessary to break up the rectangular space of blank sky above, so heavy clouds were "printed-in" to harmonize with the low tonal scheme, but allowing a light portion to come where it would concentrate interest near the shoreward part of the bridge. Clouds were used in a similar way to complete the tone and line composition of "Under Construction," a study of the great arch of the Hell Gate Bridge as it appeared in August, 1915.

In contrast with the subjects suggesting massiveness are those which, by comparison, seem as light and delicate as a spider's web, especially when seen at a little distance. The Queensborough Bridge, shown in the illustration entitled "Steel-Lace," reveals this quality strikingly on a misty day. Of cantilever form, the open-work steel truss-construction of the two river-arms, the central span over Blackwell's Island and the upper portion of the four towers as well, all contribute to the effect, and it is difficult to realize the actual size of the parts until one is almost under it. The illustration mentioned shows only the span over the west channel and a glimpse of the Blackwell's Island shore at the extreme left. Ordinarily a standpoint giving so nearly a full side-view would not be desirable, but river-shipping is frequently an aid in completing such compositions, and in the present instance means was provided for leading the eye into the picture, likewise furnishing a needed note of tonal contrast to separate planes, by waiting until a towboat and barges occupied the desired position.

When a single graceful curving line forms the characteristic feature of a span, this can sometimes be used in a decorative manner to frame the vista beyond by cutting off all sky above the footway of the bridge, thus concentrating interest upon what lies below, as in "The Bowing Arch," which shows one span of Washington Bridge, crossing the Harlem River at West 181st Street, Manhattan. High Bridge, six blocks below, appears in the vista.



UNDER CONSTRUCTION

WILLIAM S. DAVIS

"A Park-Vista" was taken under one of the small bridges which cross the transverse "sunken roads" in Central Park, New York, and indicates possibilities as to the treatment of many small bridges, for a composition of this character would be most attractive with a winding stream in place of the road.

Our last illustration, "The Little Foot-Bridge," suggests still another phase of the work, viz., when the entire effect is changed by the presence of snow and ice.

As to purely technical points relating to photographic manipulation, I know of nothing to be said that would especially apply to these subjects alone. The larger bridges taken from the water require similar treatment to marine views with shipping as regards exposure, etc.; whereas nearby views from shore demand some care to avoid violent perspective, the same as ordinary architectural compositions. The data found in "Our Illustrations" are offered in further explanation.





HIGH BRIDGE, NEW YORK  
A PARK-VISTA  
WILLIAM S. DAVIS



# A New Reducer for Negatives

NORMAN C. DECK



**A**REDUCER for negatives, which will act proportionately, and which is under full control and not erratic in its action, is one of the things for which photographers have been looking for a long time. I believe I have discovered the formula for such a reducer, and would like to pass it on to the photographic world.

We all know the special characteristic of the persulphate reducer introduced by the Lumière Brothers years ago, namely, its selective tendency to act upon the denser portions of the image; and a very valuable agent it has proved, especially when used according to the Bennett formula. But the persulphate reducer has the disadvantage of being erratic in many hands; for instance, a hardened and an unhardened film may behave quite differently in it; in fact, the hardened film may refuse to reduce at all. Some people say that the reducer acts more satisfactorily on an undried negative, and my experience agrees with this; and dried negatives, it is said, reduce more satisfactorily if soaked in water for one hour before reduction.

Others again say that images developed by certain developers are unfavorable to its action. Then we all know how it may hang fire for some time, and then go off like an express-train, and reduction may be carried too far before the negative can be plunged into the sulphite bath. Again, the persulphate reducer is not proportional in its action, and though its selective action is very valuable when needed, yet a proportional reducer would generally be of much greater utility.

The permanganate reducer, introduced by Namias, in my opinion, is a very valuable one, much more so than the persulphate, and I cannot understand why it has not been more popular. I have not found it to be an unclean reducer, as Bennett avers; and as to stains, I have never met with them when using an after clearing-bath of potassium metabisulphite. But when *considerable* reduction is desired, this reducer has a tendency to eat out the half-tones or more delicate portions of the image; this selective action, however, is very small when compared with Farmer's reducer. So, practically speaking, when only a slight reduction is needed, its action may be considered proportional.

The following is the formula I have generally used when employing potassium permanganate: 1-percent potassium permanganate, 100 minims;

10-percent sulphuric acid, 50 minims; water up to 4 ounces.

With this reducer, while reduction proceeds regularly enough, the exact time to remove the negative is not always certain, for the image may get a little clouded with a brown stain or deposit (an oxide of manganese). This, however, absolutely disappears in a clearing-bath of 1-percent potassium metabisulphite.

It occurred to me one day to try the effect of combining these two reducing-agents, when I found to my surprise that the disadvantages of each reducer had absolutely disappeared! I also discovered that by varying the proportions a reducer was obtained which, as far as the eye could judge, appeared proportional in its action; that is to say, suppose you happen to overdevelop a negative, then, by subsequent reduction in the following reducing-solution, a result is obtained which, as far as the eye can see, is the same as if development had been stopped at the right stage.

This I have tested as follows:

Two plates having the same exposure were developed for different times; after washing, the denser negative was reduced in this reducer and cleared, with the result that the two negatives are now almost impossible to distinguish.

Now to enumerate:

1. The action starts right away, and is quite regular, not hurrying up like persulphate alone.

2. It is not sensitive at all, like persulphate, to small traces of hypo from imperfect washing. In fact, with it I reduced with perfect ease a negative in which I could still just taste the hypo.

3. A hardening-bath on the film does not interfere with its subsequent reduction in this reducer, the action being regular, though somewhat slowed.

4. As yet, in my hands, it has never shown the slightest erratic action.

5. During reduction it is clearer in its action than the acid-permanganate reducer, thus the degree of reduction can be more perfectly estimated.

6. The solution, when in use, appears to keep in working-order longer than the acid-permanganate solution.

7. It is a proportional reducer (as far as the eye can see).

The reducer has the following simple formula: 1-percent potassium permanganate, 20 minims; ammonium persulphate, 10 grains; water up to 2 ounces.





HELEN HUNT FALLS

J. F. EDEN

It should be made up just before use.

The permanganate is best kept in a 1-percent solution (taking 24 grains in 5 fluid ounces of water).

The persulphate should be weighed out, or, if more convenient, 1 "Tabloid" persulphate (11 grains, near enough) may be used.

You will notice that the reducer is weak when compared with other formulæ, but it acts quite rapidly enough.

After sufficient reduction the negative should be quickly rinsed in water and cleared for five minutes (quite) in one-percent potassium metabisulphite, or in an acid fixing-bath (I use the former), and then washed and dried.

Here in the Solomon Islands I have no oppor-

tunity for making exact photometrical tests, and so I have had to rely on visual tests only, which may not be quite accurate. If some scientific man like Mr. Renwick or Dr. Kenneth Mees were to investigate the formula, he would probably find that the proportions might have to be adjusted to get strict proportional action, and I think the reducer merits such investigation.

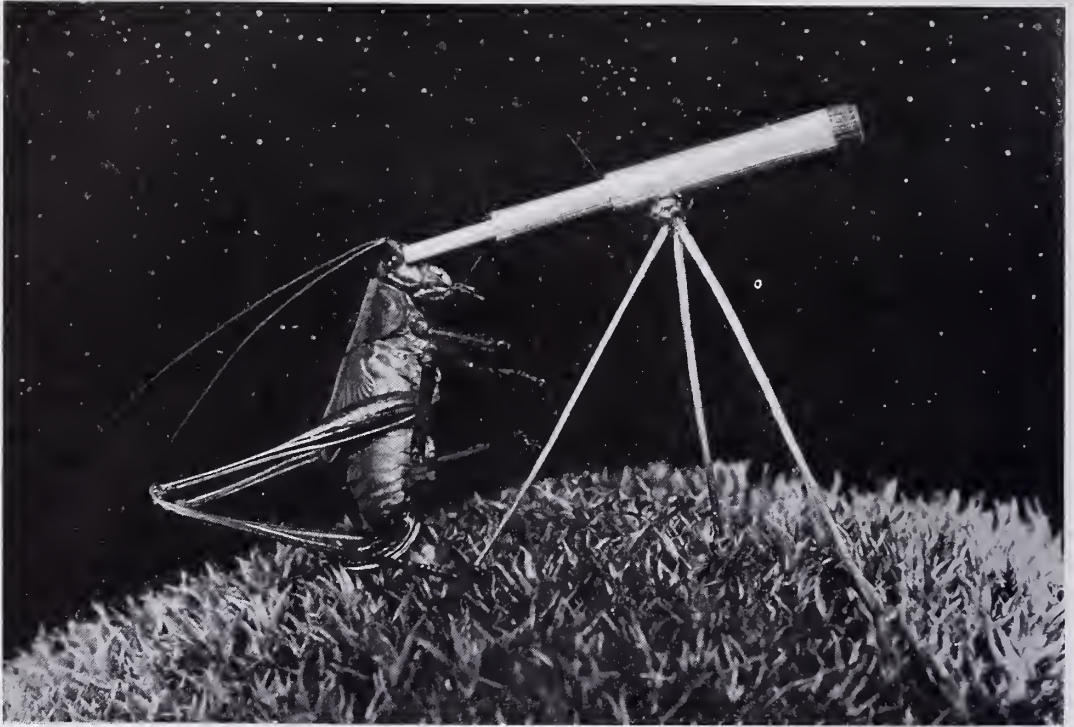
I must say, in fairness, that the tests on which I have based this article are more limited than I should desire, but I must plead the difficulty of photography in a climate in which one rarely can obtain water under 80 degrees F., and in which photographic materials, when opened, deteriorate so much in two or three weeks as to be almost useless.— *The Australasian Photo-Review*.



A RIFT IN THE CLOUDS  
E. M. BLAINE







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IN SEARCH OF A NEW COMET

LEHMAN WENDELL

## Comic Insect-Photography

LEHMAN WENDELL

**T**AKING comic insect-photographs is one of the most peculiar, as well as one of the most interesting, of all photographic diversions. I have tried a good many different photographic hobbies, but I have found nothing so truly fascinating as this new pastime. It brings us close to nature, and we unconsciously train our eyes to see the little things that are so lavishly scattered everywhere. Barren, indeed, must be the life of the man or woman who has never learned to enjoy nature and to get strength and inspiration out of it.

In order to meet success in this line of photography, three things are essential: first, good taste and judgment in composition; secondly, an unlimited amount of patience and perseverance, and last, but not least, a suitable camera. I know hardly which one of these three things is the most important; if any one be lacking, failure will be the result. By this I do not mean to discourage the photographer. It is true that this kind of

work is not so easy as going out and taking a snapshot of a dog or a hog or a frog; but the very fact that innumerable little difficulties will be met only adds zest to the hobby. No true knight of the camera will be deterred from going after certain pictures simply because they cannot be had for the asking.

Patience and perseverance are matters of acquirement. If you have to spend an hour or two in setting up a picture, and find that it topples over just as you have begun to make your exposure, do not feel that you are having worse luck than your neighbor. I spent just a day in photographing my astronomer. It was no easy matter to get the frail little telescope to point at the Milky Way while Miss Katydid held her eye close to the instrument. One of the two was bound to topple over, and it seemed impossible to get both to stand up at the same time. For the benefit of those who are losing courage I hasten to add that the astronomer was my first comic insect-picture. Meanwhile I have learned to

overcome many difficulties which at first seemed insuperable, so that now I am able to set up a picture and photograph it successfully in much less time.

And now a word about composition. Perhaps it should not be included in an article of this kind; but it plays such an important part that a somewhat detailed description of the subject may not be amiss. In landscape-photography nature has arranged or composed the picture for us, and all we have to do is to choose the proper viewpoint, the proper time of day, etc., etc., and then make our exposure. In comic insect-photography the camerist himself must compose the picture, and in order to do this successfully he must understand the laws of perspective, balance, harmony, values, etc. In fact, he must be sufficiently conversant with the fundamentals of art so that he can tell a good picture from a bad one, and know why one is good and the other is bad. Without this knowledge he will stumble into errors which will often make his pictures seem ridiculous. Now, I can suggest no better way to master composition than to study some good book on the subject, such, for instance, as "Pictorial Composition and the Critical Judgment of Pictures," by Henry R. Poore. This may seem like a roundabout way to make comic insect-pictures, but remember that the longest way around is often the shortest way home. I shall say more about composition when I come to my picture, "The Dandy."

As for equipment, any plate-camera that has a long bellows-extension and an anastigmat lens will serve the purpose. A so-called miniature camera is preferable to a large one, because, by reason of the short focus of the lens, it has a greater depth of field, and all parts of the picture can be brought into sharp focus at the same time, giving a wealth of microscopic detail throughout the picture. Needless to say, pictures of this nature are interesting in proportion to the amount of detail shown. Another reason why I advocate a small camera is that it is far easier to handle than a large instrument, and that goes a long way towards keeping one's temper unruffled. Again, the small camera can be operated cheaply, and plate after plate can be exposed without bringing up immediate visions of the poor-farm. This, also, is comforting, especially in these days of high-priced Metol.

My own camera is an Ica Ideal, an imported camera of German manufacture, taking pictures  $2\frac{1}{2} \times 3\frac{1}{2}$  inches. It has a bellows-extension of  $8\frac{1}{2}$  inches, and every inch of it is needed for some of my work. I doubt that the Ideal can be had now, but I notice that many other excellent high-grade imported pocket-cameras are advertised

in the photographic magazines. I know of no American-made cameras of the small type that can be used for insect-photography, because they are all provided with too short a bellows-extension. The American manufacturers still seem to consider the small camera a mere toy; but perhaps they will wake up some day and give us what we want. Until that time we must rely upon what can be had from abroad.

Plates are preferable to films. They are coated with a much finer grain emulsion, so that enlargements can be made to any reasonable size without presenting a mottled appearance or a loss of detail. Of course, my pictures are all enlargements. Furthermore, plates can be had in such a variety of emulsions and speeds that by proper exposure and development the desired quality of negative can always be obtained. Not least important is the fact that plates will take the pencil more readily than films, thus making careful retouching possible.

I always use an orthochromatic plate, because the insects are often brilliantly colored, and the proper color-values must be retained in the finished picture, a thing impossible with a non-orthochromatic plate. As to the particular make of plate that I use, Hammer's Orthochromatic suits me about the best. I have used both the Extra Fast Ortho and the Slow Ortho, and while the latter gives a slightly more vigorous negative, and perhaps better suited to enlarging, I do not deem it advisable to use this kind, because it requires an exposure five times longer than the Extra Fast plates. To be more explicit, an exposure of 30 seconds was sufficient for most of my insect-pictures when I used a fast plate, but a minute and a half was required with the slow plates, and that is a rather long time to expect even an anesthetized insect to sit still.

I develop all my pictures by the tank-method, as this gives me brilliant negatives without a trace of fog. I use pyro developer at 65 degrees and develop for 25 minutes. My formula for a 40-ounce tank is as follows:

Sodium sulphite, anhydrous	....97 grains
Sodium carbonate, anhydrous	...34 grains
Pyro	.....22 grains
Water	.....40 ounces

If the plates are not absolutely clear, I add 10 drops of a 10-percent solution of potassium bromide.

The pictures that accompany this article were all staged and photographed indoors. It would be out of the question to take such pictures out in the open, where the slightest movement of the air would be sufficient to upset the whole scheme of arrangement. The insects themselves were



first captured, then anesthetized and posed. The great variety of poses needed for pictures of this kind, of course, would preclude the use of dry museum-specimens. The reader, perhaps, will wonder why I do not kill the insects outright instead of merely anesthetizing them. I have found that the insects are apt to become limp if killed outright, and this would result in an unlikelike picture. Furthermore, grasshoppers often turn a bright red soon after they are dead, and this would be recorded by the camera as black.

Chloroform is perhaps the best anesthetic to use. The simplest method of administration is as follows: moisten a pellet of cotton with the chloroform and place it in the bottom of a small wine-glass. Next drop the insect into the glass and cover with a small sheet of glass. This will prevent the chloroform from evaporating, and complete anesthetization will follow in from two to five minutes. The staging of the picture should be done immediately, and the exposure made, before the insect has had time to recover from the effects of the chloroform.

Naturally, one of the main difficulties is to get the insects to stand upright; but a little ingenuity on the part of the photographer will soon solve each individual problem. In many cases all that is necessary is to balance the insects against some object, as was done with the checker-players. In other cases a prop of some sort will be required, and this should be cleverly concealed behind the insect so that it will not show in the finished picture.

In most of my pictures the foreground consists of some species of moss. This can be found growing in abundance in rocky localities or in low swampy woods. A great many varieties exist, so that sameness in one's pictures may be avoided. Where bushes are needed to break the monotony of the landscape, I use a certain species of lichen, which grows luxuriantly in many parts of the United States. It is found in rocky localities, and grows in dense masses many feet in circumference. By carefully separating a small portion from the mass an excellent imitation of underbrush will be obtained. These same lichens, if separated into individual growths, will be found to simulate dead trees closely, and by placing these where the composition would require such an item most interesting effects can be procured.

I almost invariably use a white background, as this seems to set off the insects to best advantage. A sheet of white paper is well suited for this purpose, but care should be taken not to employ a glazed variety, as it is likely to reflect too much white light into the camera and produce a fogging of the plate. A paper with a matte surface should

be used, or, better still, a pale blue paper, as this will photograph white. For a black background I use a black sheet of paper such as is used for the wrapping of plates and papers. This gives a sufficiently dark ground for all practical purposes. In case an intense black background is wanted, I photograph against a box lined with black paper, much as one would photograph against the mouth of a tunnel.

Occasionally clouds will be found to enhance the picture greatly by hiding its artificiality. These may be printed-in from special cloud-negatives made for such a purpose. It is advisable to have several dozen such negatives on hand, so that a repetition of the same cloud-effect may be avoided. Just how clouds are printed-in we need not explain here; any booklet on enlarging will make this clear.

As for enlarging-paper, I have found nothing that suits me better than Enlarging Cyko. It gives rich blacks and pure whites, and has great speed and latitude. An enlargement on this paper gives the same results as a contact-print on the ordinary grade of Cyko. Enlarging Cyko is now made in two grades, the ordinary and a contrast grade. I use the contrast grade for my



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THE ACROBAT

LEHMAN WENDELL

insect-pictures because they require snap and brilliance to set them off to best advantage.

Before concluding it might be well to consider a few of my pictures, one by one. Perhaps I can serve the reader best by quoting some of the data recorded in my note-book.

"The Dandy." Foreground, moss. Bushes, lichens. Sign-board, half-tone illustration cut out of a magazine, and glued to twigs to serve as posts. Cigarette, piece of broom-straw painted white. Smoke drawn with a pencil on negative. Background, sheet of light blue paper. Plate, Hammer's Extra Fast Ortho. Time of exposure, 30 seconds, F/36, near west window; sun bright; 2.30 P.M., August. Pyro tank-developer. Cyko enlargement.

In connection with this picture I want to call attention to one thing which shows how careful one must be in regard to details. The sign-board, as will be seen, appears in perspective, the lines converging toward what artists call the vanishing-point. Every photographer who has photographed buildings or street-scenes is familiar with this law of optics. Now, in this picture the sign-board appears in perspective, not because the camera saw it that way but because it was

actually drawn just as it appears in the photograph. In other words, the left end of the board is in reality about half as large as the right end, and both ends are exactly the same distance from the camera. We have, therefore, what we might call an optical illusion in our picture. In order to carry out this illusion further the two posts must also appear in perspective; that is, the one to the left must be a trifle smaller in circumference than the one to the right, and the one on the right must be carried below the frame-line, so as not to appear on the same level as the one on the left. Had the two posts been of the same size, and had they been placed on the same level, the error would have been apparent to anyone with a slight knowledge of art.

Again, referring to the same picture, why were the bushes placed on the left rather than on the right? Certainly not by chance or by mere whim, but in order to comply with the law of balance. Let me make this point clear. It will be found that the actual center of the paper upon which the picture is printed is also the center or pivot of the picture, and around this point the various items which go to make up the picture group themselves, pulling and hauling and warring in their claim for attention. Now, the sign-board is of such a shape that it is heavier on the right-hand side than on the left; that is, it attracts the eye more. To be sure, the preponderance of letters on the left, plus the cigarette-box and cigarette, all aid in establishing a balance, but I feel that the bushes are necessary to make the balance complete. Furthermore, they fill an otherwise glaring white space, and that is a point that must be considered.

I feel that I cannot well drop this subject of balance without giving the reader a suggestion which has aided me greatly in composing my pictures. Whenever I am working out the balance of a picture I think of a see-saw, with its point of pivot in the center of the picture. Now, two objects of equal weight, placed one on each side of the pivot, would be balanced by placing them an equal distance from the center. Or two small objects, equal in weight to one large object, could be made to balance with the large one by being placed just as far from the center on their side as the large one is from the center on its side, *providing* the two small items are placed in close juxtaposition one with the other. Again, given a small item on one side and a large one on the other, the two can be made to balance by placing the small item relatively far from the center and the large one near the center. If you have ever watched children see-sawing you know exactly how the thing works out. Three little tots will sit on one end of the see-saw, and they

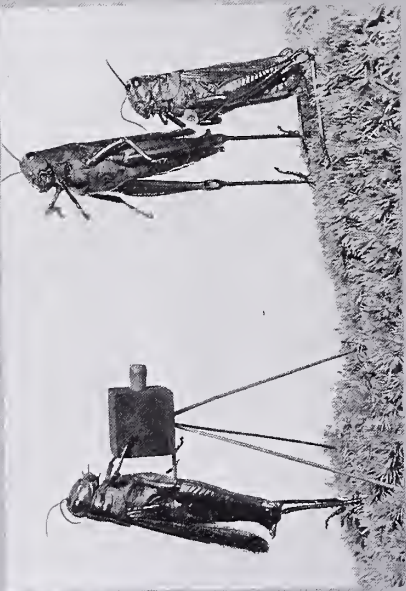
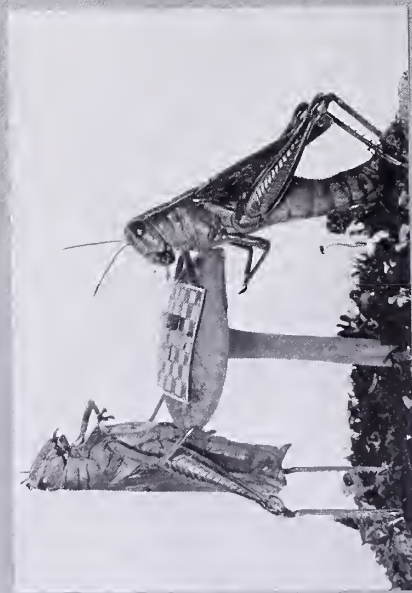


Copyright, 1916, Lehman Wendell

WAITING FOR A BITE

LEHMAN WENDELL





A GAME OF CHECKERS  
THE DANDY

*Copyright, 1916, Lehman Wendell*

LEHMAN WENDELL

AT THE PHOTOGRAPHER'S  
AN OLD SALT

will balance with "Fatty" on the other side because the three are equal in weight to the one. But when "Fatty" has only one playmate he has to crawl pretty close to the center of the board, while his companion must hang on to the very tip of the opposite end. Apply this principle to your compositions. Remember this, however, when I speak of weight I also mean attraction, the two terms being synonymous in art, so that when I say that an item has a certain weight I really mean that it has a certain attraction for the eye.

"An Old Salt." Staged in a saucer of water. Background, moss laid on the edge of the saucer. Canoe, pea-pod. Paddle carved out of wood. Clouds printed-in from second negative. Other data same as before. If darker water is wanted, use an earthenware crock or a dark pan instead of a saucer.

"In Search of a New Comet." Telescope, three pieces of straw slipped one into the other. The lens-barrel is one of the joints in the straw. Tripod made from a species of umbellate flower, all the stalks of the umbel being cut off excepting three. Sky, a sheet of black paper. Stars made by dotting the negative with black ink. Other data same as before.

"At the Photographer's." Camera, small cube of wood dipped in ink. Lens, small section of hay cut at one of the joints. Tripod, three fine wires thrust into the camera, and fine stalks of hay slipped over the wires. Other data same as before.

These few examples will suffice to explain my method of procedure. The staging of the other pictures was similar, in the main, and the reader can easily determine how they were made and devise new schemes of his own.

## Simplicity in Art

WILLIAM H. BLACAR



TO-DAY, because of the progress art has made in advance of both critics and public, we hear and read much concerning the simplicity of great art. We are told that great minds are simple minds, that art should come within the comprehension of all. And yet these very disciples of simplicity indulge in eulogies of Michelangelo and Gothic architecture; the works of the great Florentine and of the builders of the Rheims and Rouen cathedrals are anything but simple manifestations. Indeed, they are complexity itself. How is it, then, that these lovers of the simple pretend to penetrate and enjoy such art-works? The answer is that they have confused cause and effect. No great art has been born into the world since the beginning of the Renaissance which is simple art.

Even the really simple art of the ancient world is far more complex than the layman is able to understand, at a glance. There is in all art, however, a certain simplicity of vision: a great work of art presents itself as a whole. It appears to the spectator as a unique *ensemble*, as a unit. Thus, in the same way that the human body or any natural object may be simple, so is there a simplicity in art. It is a seeming, not an actual, simplicity. The reason that a person speaks of the simplicity in a Michelangelo statue or in a Gothic structure is because the æsthetic expression presents itself *en masse* as a familiar object. The subtle placements and displacements of the

statue resolve themselves into the familiar object of the human body. The infinite and fantastic ornaments of the Gothic conception resolve themselves into the familiar object of a building. But there is no such thing as great simple art. There exists only an art whose order is simple in its ultimate effect. If the preachers of simplicity could see into the fabrication of that art, could understand its infinite ramifications, they would realize that their creed is a false one.

The fact that modern art does not always appear unified is not due to its greater complexity, but to the modern artist's inability completely to visualize his work. The art of the peasants and the negro sculptors is the only true simple art. It is the expression of a simple-minded people, and, aside from its novelty, it cannot interest for long the lovers of profound beauty.

✧

THE artistic temperament is no growth of a day. It has its roots in the far-away beginnings of a people, and we make no unwarranted presumption in asserting that the landscape or marine painter of to-day is at least giving expression to the groping instincts and ideals of his cave-dwelling forbears. In this way only can we explain the fact that the peoples of Northern Europe, whose ancestors lived close to nature, have alone been able to comprehend and place upon canvas the ever-varying moods of nature.

Birge Harrison.





FOUNTAIN WITH DANCING FIGURES  
FINE ARTS LAGOON, PANAMA-PACIFIC EXPOSITION  
W. H. RABE



# The Magic Masks

MILTON M. BITTER



WATCH me closely. Please note that I have nothing up my sleeve. I take my knife — so; cut a hole in the lower right-hand corner of this piece of 6- or 8-ply dead-black cardboard — so; then a hole in the lower center of another piece — so; and still another hole in the lower left-hand corner of a third piece.

Lo and behold! I have transformed these simple pieces of cardboard into magical instruments that will work wonders for me, save time, labor and expense, eliminate guess-work, give me exact knowledge and enable me to standardize my photographic processes.

They will enable me to make comparative tests of the six speeds of my shutter, and show me, *on one plate*, the results, so that I may have a permanent record. They will teach me what correct exposure is — the most important of all photographic problems. They will prove for me — with the aid of my little ten-cent glass-cutter — which one of the six periods of time is correct for developing my plate with a certain developer of a certain strength at a certain temperature. They will enable me to test six different developers (or one developer of varying strengths or temperatures) *on the same plate* on six uniform exposures under exactly the same light-conditions.

They will provide an accurate test for my color-screens and prove definitely their factors for the particular plate I am using, for, with the Magic Masks, I can make — all on one plate — one exposure with no color-screen; one with a 2x (two-time) screen, one with a 3x, another with 5x (2x on back of lens; 3x on front), another with a 4x, and still another by combining any of the preceding two; and thus I can make prints from each, and, taking the prints with me to the scene I photographed, I can learn which screen (or combination) gave me truest color-values. This trip back to the “scene of my offence” will also, probably, prove to me the futility of trying to judge things of this kind at home — from memory.

With the assistance of the Magic Masks, I can determine which of several lightings is the best for a home-portrait, etc., and what is the most effective spacing, by making six test-exposures on one plate.

The Masks will help me to prove, with only one plate, which of six varying quantities of flashpowder is the proper amount for the par-

ticular kind of results I need for making a bust-portrait at home. I can also use them to help me to determine at what distance to work my reflector for illuminating the shadow side of the face, etc.

They will enable me to take, on one plate, individual pictures (bust-portraits with  $\frac{3}{4}$ -inch faces or longer on a 5 x 7 plate) of each of our jolly picnic party of six, and, if my exposures have been correct for each, I can print all six at the same time.

The masks will demonstrate for me — again with the aid of the Red Devil — the different character of negatives produced by rocking or not rocking the tray during development. Or I can test various lenses on the same emulsion, under exactly the same light-conditions, and in the same developer or different developers. They will also show me the character of results produced with six different stops in photographing the same scene from the same standpoint.

They will enable me to test the distances at which I can “freeze” the motion of a running boy, or an animal, at varying shutter-speeds.

They will —. The possibilities are so great that I must stop, or the editor’s blue pencil will stop me. In short, these magic masks will enable one to make six exposures on one plate in any camera having a ground-glass focusing-screen, and even with cameras of the reflex type, with a little extra care.

*With six exposures on one plate, the arriving at definite conclusions is made possible by experimentation and tests which do not waste material, time and energy.*

It’s high time to eliminate a lot of our guess-work and standardize our processes; so let us master two plates, one rapid orthochromatic (or panchromatic) double-coated or backed, and another of about twice the speed. Some of us had better stop, for awhile, in our attempts to make real pictures, and “practise scales” for a few months, until we acquire more exact knowledge and a surer touch.

The Magic Masks will work wonders for the serious student, not only in the ways I have suggested but in numerous others, according to his own ingenuity.

In using a Magic Mask simply put it in the placeholder-space in your camera, focus, then put the placeholder back of the mask (which must be cut short enough to permit the safety edge on the placeholder to rest in its groove (rabbet) in



the camera-back, so that the plate will not be light-struck), set the shutter, draw the slide, expose, replace the slide and you're ready for Mask No. 2.

(I must first state that Figure 1 is intended to be merely suggestive and helpful to you in following the details as presented. This par-

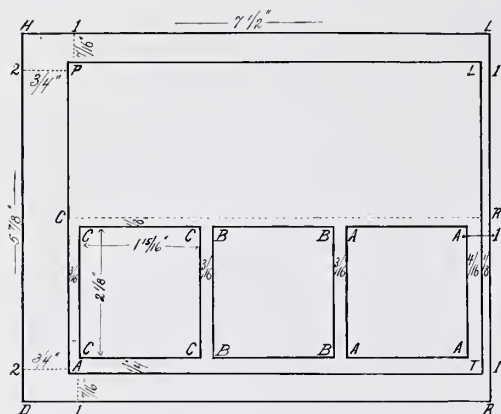


FIGURE 1

ticular design represents the measurements of my 5 x 7 Eastman Portrait-Film Holder. In using this film the full 5 x 7 surface is not available because of the metal grooves in the special film-holder which hold the film in place; so in making the holes in my own masks small enough for the Portrait-Film, of course, I can also use them for my plates, the outside measurements of my different holders being the same below the safety ridge which fits into the rabbet on the back of the camera.)

Get a sheet of cardboard, pressboard or fiberboard which is dead black on both sides; 6-ply is heavy enough for 5 x 7. If you use a cardboard that is white in the center, be sure to paint the edges of the openings with India ink or black watercolor.

Measure the width (H-D) of your plateholder and its length (H-L) below the inside edge of the safety ridge which fits into the groove (rabbet) on the back of your camera to keep the holder in place and prevent light from striking the plate. Then cut three pieces of cardboard (H-L-D-R) according to the measurements just taken, also one piece of stout paper, the same size, to use as your design. Measure the width (P-I) of the sides and lower end (P-2) of the frame of your plateholder, and draw on your pattern the lines P-L-A-T according to these measurements. The space inside the rectangle P-L-A-T will then represent your

plate-opening in your holder; the margin between this rectangle and the rectangle H-L-D-R is the plateholder frame, *exclusive of that portion above the safety ridge*. Bear in mind that the masks must *not* extend over this safety ridge, else the ridge could not sink into its groove, the plateholder would not lie flat against the camera-back and the plates would be light-struck.

Now draw a light line, C-R, horizontally through the center of the rectangle P-L-A-T. The making of the rest of the pattern is simply a matter of deciding how large you wish the openings to be and how many you want. My own measurements are shown in Figure 1 for a six-exposure set of masks.

If you wish to make only four exposures on a plate, then two masks will be sufficient. In fact, one will do if you are willing to sacrifice a little space on the outer end of the plate; for you can readily see that by using a 1/4-mask in four positions you can make four exposures on the same plate with one mask if the opening is cut to allow for its use when reversed, end-for-end. Two masks for a four-exposure or two-exposure set are advisable, however, as you can thus make larger pictures.

Bear in mind that the masks, in use, are in front of the plateholders and a considerable distance in front of the plate (about 3/16"), hence the image will be a trifle larger than the opening; so in making your design allow liberal space between the openings (about 3/16") and at the sides and ends. One-eighth inch space below the center line will leave a space of 1/4" between the two rows of images on the negatives when the masks are reversed — a very liberal allowance. Leave at least 3/8" at right of right-hand opening

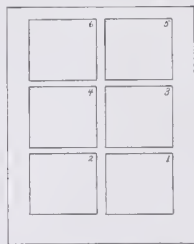


FIGURE 2

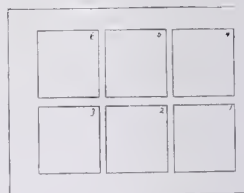


FIGURE 3

(A-1) so that your mask will be wide enough to permit handling without injury. All of these measurements have to do with a 5 x 7 set for a Portrait-Film Holder. For a regular 5 x 7 plateholder the openings in the masks can be made larger by extending down to within 1/8" of the edge of the plate. It is well, however, not to

work too near the edges, so that if you have frilling it will not affect your images.

Having made the design on plain paper, lay it over one piece of the black cardboard and, holding it firmly in place, take a pin and press the point through the points AAAA. Then, using these pin-points as markers on your black cardboard, draw the rectangle AAAA with a lead-pencil. In like manner lay off the rectangle BBBB on the second piece of cardboard and the rectangle CCCC on the third piece. Then lay your pattern away safely, and should you accidentally lose or injure one of your masks, you will not have to make your measurements all over again. The pattern should be made on stout paper.

Now take up the cardboard AAAA. Lay it on a *hard surface*, a piece of zinc or glass or linoleum; then cut out the opening. Use a very sharp, thin knife or you will not get clean edges. In cutting openings of this kind, always work with the ruler on the *outside* of the opening (not over it), then if the knife slips it will not cut into the mask but into the rectangle which is being cut out. Having cut the opening AAAA, lay the mask before you horizontally, with the opening in the *lower, right-hand corner* and make a large figure 1 with white watercolor in the *upper, right-hand corner*. (The masks will ALWAYS be used, whether horizontally or perpendicularly, *with the working-number in the upper, right-hand corner*.) Then turn the mask quarter-way around so that the opening AAAA is in the *upper, right-hand corner*, with the mask lying perpendicularly before you. Place a figure 5 in the *upper, right-hand corner*.

Now, turning the mask *over* and laying it horizontally before you, with the opening in the *upper, right-hand corner*, place the figure 4 in the *upper, right-hand corner*. Then turn the mask quarter-way around with the opening in the *upper, left-hand corner*, and place the figure 6 in the *upper, right-hand corner*.

To number mask BBBB, lay it horizontally with opening in *lower center*. Number *upper, right-hand corner* 2. Turn mask quarter-way around with opening at *right-hand center*. Number *upper, right-hand corner* 3. Turn mask *over* with opening in *upper center*. Number *upper, right-hand corner* 5. Turn mask quarter-way around with opening in *center of left-hand side*. Number *upper, right-hand corner* 4.

To number mask CCCC, lay it horizontally with opening in *lower, left-hand corner*. Number *upper, right-hand corner* 3. Turn mask quarter-way around with opening in *lower, right-hand corner*. Number *upper, right-hand corner* 1. Turn mask *over*. Lay it horizontally with opening in *upper, left-hand corner*. Number *upper, right-hand corner* 6. Turn mask quarter-way around with opening in *lower, left-hand corner*. Number *upper, right-hand corner* 2.

Figures 2 and 3 will help you in the numbering. With this arrangement of numbers, and making the exposures accordingly, when you make a proof or print from your negative you will find the *first image*, No. 1, in the *upper, left-hand corner*, where it should be, and the others will follow in order. And now to show the direct application of the masks.

(To be concluded)



A NEMAHBIN LANDSCAPE

B. F. LANGLAND





“NOW IF I WAS PRESIDENT —”  
W. R. BRADFORD





## EDITORIAL



### Photographs of Purely Personal Interest

IT pains the discriminating editor of a high-class publication when obliged to reject portraits of persons in private life, on account of their lack of popular or general interest, because he cannot agree with the senders in their opinion that the pictures are quite extraordinary. The contributor of a picture that interests only the members of the family and a few intimate friends, but is devoid of artistic and technical merit, rarely understands why such a picture cannot win the attention of the general public. The Editor frequently receives photographs of a recent baby that created a stir in the family and, maybe, in the neighborhood by its physical beauty or uncommon intelligence; but, being impromptu snapshots where no attempt has been made to remove or subdue pictorially objectionable accessories, these pictures usually have little or no artistic merit. They are mere records of fact; yet from their sentiment and association they may mean more to the parents than if they were works of art. This personal interest also characterizes mediocre photographs of incidents in a foreign journey which look commonplace to disinterested persons who, because of their lack of enthusiasm, are not necessarily devoid of all feeling or sentiment. Unless photographs that have primarily a personal association are eminently artistic or technically important, they are not likely to receive special consideration from the editor of an illustrated magazine.

### A Demand for Swiss Photographs

AN Eastern art-dealer, who for years has done a good business in the sale of photographic enlargements of Swiss mountain-scenery, is at a loss to understand why our photographers are reluctant to meet the demand for American subjects of an equally artistic quality. Photographs of American mountain-scenery, this picture-dealer declares, are mere technical records, whereas those of Swiss subjects are glorious, poetic interpretations. The truth is that the Swiss mountain-photographer approaches his task in a truly artistic spirit. He studies the mountain — be it the Jungfrau or the Matterhorn — in its various aspects of position, light

and atmosphere, giving it a setting that shall emphasize its beauty and grandeur. In the enlargement, which is of generous dimensions — generally 42 x 60 inches — he expresses these essential qualities in an eminent degree, by reason of a suitable printing-medium and a depth and richness of tone. The admirer of one of these superb enlargements usually asks to see a similarly effective presentation of Pike's Peak or Mount Tacoma, but the dealer is unable to comply. Surely, certain American mountain-peaks can match any in size and beauty in the Bernese Oberland; and if some enterprising art-publisher will take the trouble to procure adequate photographic enlargements of our great mountains — similar in artistic effect to well-known photographs of Niagara Falls, for instance — he will find a ready market for them.

The artistic beauty of these views of Niagara Falls was due to the fact that the photographer made his temporary home nearby and could observe the wonderful spectacle each day, with special reference to the quality, strength and direction of the light, the aspect of the sky, with its different cloud-formations, and the condition of the wind as it affected the rising mist. He was ever ready to reach for his camera to secure the coveted view before it changed. Only in this way can mountains be photographed at their best.

In this connection it may be well to remark that the photographs of American scenery published in the popular magazines and in the daily press rarely convey an adequate idea of its true character. Even the photographic illustrations in the booklets issued by the publicity-departments of our railways for the purpose of attracting visitors to the picturesque regions through which they pass are exceedingly tame and ineffective. They might as well be omitted, for all the good they will do. The author of the original photographs was probably ill-equipped to do justice to the subjects, else he did not take sufficient pains. Many commercial photographers are apt to dwarf the grandeur of mountain-scenery by using short-focus lenses; by ignoring the principles of uphill or downhill perspective, or by including too much in the picture-space. A proper sense of proportion marks the well-ordered composition of a mountain-picture. To make the most of every camera-subject should be the aim of the serious photographer.





# ADVANCED COMPETITION



Closing the last day of every month  
Address all prints to PHOTO-ERA, Monthly Competition  
383 Boylston Street, Boston, U. S. A.

## Prizes

*First Prize:* Value \$10.00.

*Second Prize:* Value \$5.00.

*Third Prize:* Value \$2.50.

*Honorable Mention:* Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.

## Rules

1. This competition is free and open to any camerist desiring to enter.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. **Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.** Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P. or black-and-white paper having the same gradations and detail.

3. *Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name, address, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what competition it is intended.*

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with *double thicknesses of stiff corrugated board, not the flexible kind, or with thin wood-veneer.* Large packages may be sent by express very cheaply and with indemnity against loss.

7. The prints winning prizes or Honorable Mention in the twelve successive competitions of every year constitute a circulating collection which will be sent for public exhibition to camera-clubs, art-clubs and educational institutions throughout the country. The only charge is prepayment of expressage to the next destination on the route-list. This collection is every year of rare beauty and exceptional educational value.

## Quarterly Miscellaneous Competitions

IN order to extend the opportunities for participation by a larger number of our readers, and to broaden the scope of the entries, these will be a feature of 1917.

## Awards — Speed-Pictures

Closed June 30, 1916

*First Prize:* George Krause.

*Second Prize:* Charles C. Smith.

*Third Prize:* Franklin I. Jordan.

*Honorable Mention:* Herbert Beardsley, Holmes I. Mettee, Chas. J. Neeson, Kenneth D. Smith, E. A. Waterman.

Special commendation is due the following workers for meritorious prints: Ben C. Barnes, J. Bosshart, Jr., Alice F. Foster, Robert Karger, Max Kozlinka, Henry G. Krebs, T. W. Lindsell, F. R. Smalley, J. A. Whitecar.

## Subjects for Competition

"Figures in Landscape." Closes August 31.

"Animals in Landscape." Closes September 30.

"Marines." Closes October 31.

"Camp-Scenes." Closes November 30.

"Flashlights." Closes December 31.

"The Spirit of Christmas." Closes January 31.

"Miscellaneous." Closes February 28.

"The Spirit of Winter." Closes March 31.

"Home-Portraits." Closes April 30.

"Miscellaneous." Closes May 31.

"The Spirit of Spring." Closes June 30.



Photo-Era Prize-Cup

IN deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

## Treating Cuts on the Fingers

PROFESSIONAL and amateur-workers, when using very strong photographic solutions, are often troubled with painful and aggravated cuts, bruises, hang-nails or burns. Wearing gloves helps some; but the best remedy is an application of flexible collodion, which is waterproof, chemically pure and heals quickly.

A one-ounce bottle, with a long, round camel-hair brush fixed in the cork, costing only 15 cents, can be bought at any drug-store. It is well to avoid substitutes that contain only a few drops, evaporate quickly and cost relatively one hundred times as much.



A DANGEROUS CURVE

GEORGE KRAUSE

FIRST PRIZE — SPEED-PICTURES

**Marines — Advanced Competition  
Closes October 31, 1916**

CONSIDER the sea's listless chime —  
Time's self it is, made audible;  
The murmur of the earth's own shell —  
. . . . . Since time was,  
This sound hath told the lapse of time.

The mysterious charm of the sea — how it draws and holds us; ever changing — yet always the same, to artist and poet alike the symbol of infinity. How entirely beyond calculation the films and plates that are exposed each season in the effort to portray fittingly the ever-changing charms of "Old Ocean" — and how appallingly few the really satisfactory pictures obtained!

It is very seldom that one sees a photograph of a marine subject that is of such a quality that one cares to hang it on the wall, or feels in viewing it the same thrill of emotion that is aroused by the scene itself. The artist of the brush has the advantage of color to aid him, yet few indeed are the really great portrayals of this difficult theme. Life and motion and ever-changing color are so vital a part of the sea's fascination that, shorn of these, it fails of its chief charm; yet there is also a beauty of form in the breaking wave or curving shore, a play of light and shade over shimmering surfaces, that even in monochrome enchant the eye

and, with the aid of imagination, bring to mind all the life and color, the majesty and grandeur, the restlessness and power, of the sea's self.

Winslow Homer is the man who has been the best student and painter of New England's "stern and rock-bound coast," and among photographers Mr. James H. McCorkle has perhaps given us the best pictures of that section. Of all the photographers of the sea, however, the one who seems most successful in getting the very spirit of the stormy element into his pictures is the Englishman, Mr. F. J. Mortimer. In No. 71 of the *Photo-Miniature* may be found a wonderful series of pictures by Mr. Mortimer, among which are some of the finest things imaginable in seer-photography. "The Spirit of the Storm" is especially fine in lighting and composition.

Mr. William Norrie is another successful artist in sea-photography, but his is more apt to be a quiet, peaceful ocean, bearing on its bosom the picturesque sails of the Scotch fishing-boats. Three of Mr. Norrie's wonderful skies may be found in *PHOTO-ERA*. One in May, 1913, shows the satin sheen of the water under a heavily lowering sky; in lighter tones is the curving shore and beautifully clouded sky of the view in May, 1915; while the sunset shown in August, 1913, is another subject, in very low tones, quite suggestive of moonlight. In July, 1911, are several of his characteristic views; among them a beautiful one including sev-





THE EMPIRE STATE EXPRESS

CHARLES C. SMITH

SECOND PRIZE — SPEED-PICTURES

eral fishing-craft, their dark sails reflected in an almost glassy sea.

There is no easy path to the production of such surf-subjects as Mr. Mortimer gives us. His equipment consists of oilskins, a "sou-wester" and heavy hob-nailed sea-boots, with, when the occasion requires it, a rope around his waist held by a stalwart friend on shore. The camera must also be "waterproof" for work of this sort. One of the "box" variety with a reliable focusing-scale and a "before the lens" shutter is recommended by Mr. Mortimer as best for this sort of service. The folding camera, with its exposed metal-work and bellows, would be ruined in a short time by the flying spray, even should it escape the quite possible drenching. The metal shutters are also impracticable for such close work as this, and even when one keeps at a safe distance the extreme dampness and the salt "spin-drift" will soon work havoc unless great care is taken. If the shutter gets the least bit rusty or corroded its speed cannot be relied upon, and all sorts of troubles result from such inaccuracy. The roller-blind type of shutter has the advantage of working in front of the lens and so protecting it from the spray and condensation. The focal-plane shutter is also excellent for such work; if this is used, however, the lens must be kept capped up to the moment of exposure, but — do not forget to remove the cap before exposing, and avoid subsequent disappointment.

The apparent height of a wave is greatly increased by taking a position as low and as near as possible. One must be ready to retire with speed and alacrity the instant the exposure is made, however, and more or less of a drenching is inevitable if close work is attempted. One should study the wave-formation and observe the rhythm with which the larger waves appear. Usually they seem to come in groups of three, at more or less regular intervals, and if one is on the look-

out they may be seen at some distance and made ready for. There is a strategic moment just as the wave curls over when it seems to pause for an instant before letting go its "great white avalanche of thunder" — then is the time to press the bulb. If taken somewhat against the light there is a clear translucence just as the feather of white begins to form which is a delight to the soul if it can be caught.

When the waves dash into spray against the rocks the spectacle is an awe-inspiring one, but one most difficult to photograph with even a moderate degree of success. Unless the exposure is very short the moving mass of white becomes merely a blurred and meaningless smear, of no beauty or life. If the time is shortened too much, however, the spray is "frozen" and looks like ice; or, as some one has described the results of underexposure on such subjects, like "waves of milk breaking over coal heaps."

The light at the shore is so much more actinic than it is inland that a much shorter exposure may be given and still produce a fully timed negative. Rather than shorten the time too much, however, it is better to cut down the working-aperture of the lens or use a light ray-screen.

The best point of view is seldom obtained by pointing the camera straight out to sea; a curving line of shore or a somewhat diagonal wave-line is preferable, giving more variety and a better composition. But the surf is not the only aspect of the ocean that is worthy of our effort, nor is it pictorial only in time of storm. Its quieter moods have also their characteristic charm. If a sail or two can be included they add interest and life to the view and break up any too obvious monotony of horizontal lines. A trim yacht leaning to the wind is a beautifully graceful thing, and a group of them skimming like white gulls over the water, or lying becalmed, their sails cutting dark against

THIRD PRIZE  
SPEED-PICTURES



COMING HIS WAY

FRANKLIN I. JORDAN

the luminous sky of evening, would make a fine study. The best view of a sailboat is seldom a broadside; more pleasing is a view from in front or from behind, showing the leaning masts, the parted water at prow or stern, giving more action and life to the whole.

As in all outdoor-work the early morning-hours or the late afternoon give best results, when shadows are long and lights less glaring. Even more than in landscape-work does the condition of the over-arching sky affect the color and light and shade of the sea-view. Every floating cloud and every wandering breeze produces a change in the appearance of the water, and in this work more than in any other phase of the photographic field a quick eye and an instantaneous readiness of action is essential to success. A view which has been uninteresting, with a dead and dark appearance, may be transformed in a moment, by the parting of the clouds or the dying down of the wind, into a charming picture with a shimmering light on the water and reflections of sails wavering over it. The charm may be lost again in another moment, and the camera that is always ready for quick action is the one that carries away the picture.

The clear translucence of breaking waves is better shown when looking toward the light, and the sheen of still water is also brought out better by such a viewpoint.

A moderately slow plate is better for marine-work than an over-rapid one, and in development one should work for a rather thin plate full of detail both in high-light and shadow.

Extra care must be taken of the apparatus at the shore. After each day's work all metal parts should be carefully cleaned and dried, and the lens itself wiped with great care, as particles of sand may have lodged

there, and unless carefully removed would cause scratches. Because of atmospheric conditions and liability of wetting with spray, if not by the waves themselves, the simpler the equipment the better, so it gives good sharp definition which will allow of enlargement when a satisfactory composition is secured.

KATHERINE BINGHAM.

### The Pictures on Your Walls

A RECENT issue of *The Picture and Art Trade* contains the following notice sent by a western picture-dealer to his customers:

#### AN APPEAL FROM THE OUTRAGED PICTURES OF THE WORLD

But too many masterpieces are framed so inappropriately, nay, infamously, that they cry out to be released from their in-harmonious and unhappy environment.

Hundreds of pictures hanging on walls are screaming lamentably, the best productions in many instances crying out the loudest. Right framing, of course, is the only remedy for the outraged shrieking picture.

The above serves as a suggestion to secretaries of live camera-clubs to include in their next season's program a lecture on framing by some art-dealer who is an authority on the subject. Fortunately, the framing of photographic prints offers no serious difficulty. They are usually framed close, without margins, in plain, dark, flat mouldings; or, unless the subject is a portrait, with wide margins — showing the mount — in a dark, narrow moulding. There are several ways to make one's own frames, if preferred.





# THE CRUCIBLE

A MONTHLY DIGEST OF PHOTOGRAPHIC FACTS  
With Reviews of Foreign Magazines, Progress and Investigation  
Edited by PHIL M. RILEY



## The Monochromatic View-Finder

COLOR is a deceptive thing, and during those autumn days when all nature becomes a chromatic maze one is likely to be led astray by its allurements, for it must be remembered that unless one adopt Autochrome or Paget plates and confine the results to transparencies the finished work will be in monochrome and often disappointing, even untrue. Of course, the use of panchromatic plates and suitable light-filters will yield true color-values, but even this does not ensure adequate rendering of a picture which is chiefly dependent upon color. In any monochromatic art, photography or otherwise, the picture must have a fundamental structure of line as well as of chiaroscuro, irrespective of color. It is well, therefore, to disregard color entirely when selecting the view and the viewpoint, and to consider it only in connection with the light when determining the duration of exposure or in choosing the depth of the yellow filter, which alters somewhat the relative tone of certain objects according to color, and so may be utilized to regulate the chiaroscuro to a limited degree. There is on the market a direct-vision finder with a blue glass instead of a metal pointer sight. Looking through this obliterates color and so serves an artistic as well as a technical function. If the composition satisfies the eye in line and chiaroscuro as seen in this finder it will do so likewise as seen in the negative and final print.

## Positive Blue-Prints from Positives

WHEREAS the ordinary blue-print process gives positive prints from negatives, there is a modification of it, known as the Pellet process, from its inventor, which gives us positive prints from negatives, and so is often very useful for copying drawings, etc., where the lines are required dark on a light ground to allow the prints to be tinted. Like other blue-print processes it is one which can easily be worked by the amateur in all its stages, including the preparation and application of the sensitizer.

To prepare this solution, an ounce of gum arabic is left to soak for a day or two in five ounces of cold water, and when dissolved the solution is carefully strained through a piece of muslin. The other solutions consist of half an ounce of iron perchloride in an ounce of water, and an ounce of iron ammonio-citrate in two ounces of water. One ounce of the gum solution is taken, and to it are added three drams of the citrate and two drams of the chloride solutions, which are then thoroughly mixed together, and should be applied to the paper forthwith.

It is best to use a flat brush or a sponge for this purpose, working by artificial light. A little of the liquid is poured into a saucer, and the brush being dipped in it the paper is quickly coated by a series of parallel strokes, and is then turned through a right angle and strokes across the first are made until an even tint is secured. The quality of the paper used is not very material; it is surprising what good effects can be got on quite common papers. The only condition of importance seems to be that they shall be well sized, so as to keep the image on the surface. Drying is done in the dark, and the paper should be printed as soon after drying as possible.

Such paper is printed by daylight in the usual way, except that a positive is used instead of a negative. When printing is complete the details will be fully visible; but the image has to be developed. For this purpose it is brushed over with a solution of one ounce of potassium ferrocyanide in five ounces of water, which at once causes the details to stand out in a deep blue color. When they are fully out it is only necessary to place the prints in dilute hydrochloric acid, one ounce of strong acid to the pint of water, until the whites are quite clear, and then to remove the acid by means of a few changes of plain water.

L. E. FARRINGTON, in *Photography and Focus*.

## Blackening Brass

THERE is a considerable demand for a satisfactory chemical method of blackening brass, and since the most generally satisfactory method is probably that which utilizes copper carbonate dissolved in ammonia solution, the Laboratory has conducted a number of experiments on the best conditions for obtaining a good black deposit.

It was found that in the preparation of the solution the most important points are the concentration of the ammonia employed and the preparation of the copper carbonate.

The copper carbonate is precipitated by adding a hot filtered solution of sodium carbonate to a hot filtered solution of copper sulphate, and is then washed very thoroughly by decantation until test shows it to be free of copper and sulphates. This thorough washing is very essential. The copper carbonate can then be filtered by using an alundum filter dish and kept in the form of paste, though it is sometimes more convenient to dry by heat and use the powder. Paper must not be used for filtering, because small threads may dissolve in the ammoniacal copper solution and affect the result.

The brass to be blackened should be agitated in the solution at a temperature near 100° F. After blackening it should be rinsed off and either dried or baked. The most satisfactory solution will be found to be as follows:

10 % ammonia.....	25 parts
Dry copper carbonate.....	5 parts
Water to make.....	100 parts

The important part of this formula is the exact amount of ammonia used, and this will vary slightly with the nature of the brass; a considerable increase or decrease of the ammonia will prevent a good surface being obtained. Some of the copper carbonate will remain in suspension since the ammonia will be insufficient to dissolve it all; the undissolved carbonate, however, will do no harm. Some advantage can be gained by adding substances such as gelatine, fish glue, gums, etc., to the bath, the most satisfactory addition being a small amount of fish glue; the addition of 3% of LePage's Process fish glue to the above formula is a distinct advantage, and if the brass after treatment is stoved, a very good black finish can be obtained. The time of treatment in the bath with or without the fish glue will be from fifteen to thirty minutes to get a satisfactory black deposit.—DR. S. E. SHEPPARD, *Research Laboratory of the Eastman Kodak Company*.



# BEGINNERS' COMPETITION



Closing the last day of every month  
Address all prints to PHOTO-ERA, Round Robin Guild Competition  
383 Boylston Street, Boston, U. S. A.

## Prizes

*First Prize:* Value \$5.00.

*Second Prize:* Value \$2.50.

*Third Prize:* Value \$1.50.

*Honorable Mention:* Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

A certificate of award, printed on parchment paper, will be sent on request.

*Subject* for each contest is "*Miscellaneous*"; but only original prints are desired.

Prizes, chosen by the winner, will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

## Rules

1. This competition is open only to members of the Round Robin Guild. Membership, however, is free to all subscribers; also to regular purchasers of PHOTO-ERA on receipt of their name and address, for registration, and that of their dealer.

2. All Guild members are eligible in this competition provided they never have received a prize from PHOTO-ERA other than in the Beginners' Class. Any one who has received only Honorable Mention in the PHOTO-ERA Advanced Competition still remains eligible in the Round Robin Guild Beginners' Competition; but upon winning a prize in the Advanced Class, one cannot again participate in the Beginners' Class. Of course, beginners are at liberty to enter the Advanced Class whenever they so desire.

3. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. *Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.* Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P. or black-and-white paper having the same gradations and detail.

4. *Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data. Criticism on request.*

5. *Each print entered must bear the maker's name, address, Guild-number, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what contest it is intended.*

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit being given.

7. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with *double thicknesses of stiff corrugated board, not the flexible kind, or with thin wood-beneer.* Large packages may be sent by express very cheaply and with indemnity against loss.

## Awards — Beginners' Contest

Closed June 30, 1916

*First Prize:* James Allan.

*Second Prize:* M. C. Still.

*Third Prize:* William J. Wilson.

*Honorable Mention:* W. G. Adams, Margaret Anderson, S. A. Chapman, J. Louis Cunningham, Emil H. Kopp, Jr., I. S. Lovegrove, Guy E. Osborne, A. J. Voorhees, A. S. Workman.

Special commendation is due the following workers for meritorious prints: H. A. Caum, Vincent Driscoll, Chas. A. Lowry, Louis R. Murray, Jacob Pudliner, Mrs. H. G. Reed, Walter G. Willis, Elizabeth B. Wotkyns.

## Why Every Beginner Should Compete

THE trouble with most competitions is that they place the beginner at a disadvantage. If advanced workers be allowed to compete, beginners have little chance to win prizes, and so quickly lose interest after a few trials.

There are two monthly competitions in which prints may be entered with prizes commensurate with the value of the subjects likely to be entered. They are: The Round Robin Guild Competition and the PHOTO-ERA Competition. The former is the better one for a beginner to enter first, though he may, whenever it pleases him, participate in the latter. After having won a few prizes in the Beginners' Class it is time to enter prints in the PHOTO-ERA Competition for advanced workers.

As soon as one has been awarded a prize in the PHOTO-ERA Competition, he may consider himself an advanced worker, so far as PHOTO-ERA records are concerned, and after that time, naturally, he will not care to be announced as the winner of a prize in the Beginners' Class, but will prefer always to compete in the PHOTO-ERA Competition for advanced workers. In accordance with this natural impulse, it has been made a rule by the Publisher that prize-winners in the Advanced Class may not compete in the Beginners' Class.

To measure skill with other beginners tends to maintain interest in the competition every month. Competent judges select the prize-winning prints, and if one does not find his among them there is a good reason. Sending a print which failed to the Guild Editor for criticism will disclose what it was, and if the error be technical rather than artistic, a request to the Guild Editor for suggestions how to avoid the trouble will bring forth expert information. The Round Robin Guild Departments, including those of personal counsel and criticism, form an endless chain of advice and assistance if members will connect the links.

## The Wanamaker Exhibition

THE second competitive pictorial exhibition to be held by John Wanamaker, Philadelphia, November 1 to 18, 1916, and advertised in our August issue, will admit, with all privileges, pictures that have won prizes or honorable-mention in PHOTO-ERA competitions. We are authorized to make this announcement for the benefit of successful participants in our monthly competitions.

PICTURES should not need literary descriptions.

— Alfred Stevens.





# THE ROUND ROBIN GUILD

An Association of Beginners in Photography

Conducted by KATHERINE BINGHAM



*This association, conducted under the auspices of PHOTO-ERA, and of which PHOTO-ERA is the official organ, is intended primarily for the benefit of beginners in photography. The aim of the association is to assist photographers by giving them information, advice and criticism in the Guild pages of PHOTO-ERA and by personal correspondence. Membership is free to subscribers and regular purchasers of the magazine sending name and address to PHOTO-ERA, The Round Robin Guild, 383 Boylston Street, Boston, U. S. A.*

## Pictorialism for the Beginner

PEOPLE purchase cameras for various reasons. The majority of amateurs probably take up photography merely from a desire for individual mementos of outings and trips, snapshots of friends or other records of their doings and surroundings. Some are content to continue with no desire for any further progress, while others, beginning in the same way, soon realize the possibilities of the pastime and try to secure something more than mere records.

To such, a word about pictorialism, so called, may not come amiss. It is hard to realize at first that any sort of view that looks attractive to the eye may not make a satisfactory picture. We cannot understand why it is that our more discriminating friend may travel for an entire afternoon with a heavy outfit and perhaps take only one picture, or even none at all, when to our minds hundreds of "pretty" pictures are on every hand. In the first place, we must learn that to make a "picture" there must be one central point of interest; one thing that stands out prominently as the subject of the print. A picture of a country-road with a brook flowing beside it and cattle feeding in the pasture beyond may be good to look at, but for pictorial purposes it must be made use of for three different pictures — not all included in one.

The chief interest of the picture should not be placed in the exact center of the print, but should be at one side or the other. About one-third of the way from one side is a good rule. In a road-picture, for instance, the main interest is apt to be the point where the road disappears. The lines of the road and the roadside-fences, bushes or trees, all converge toward this point, and if a glimpse of far hills, or other interest, is seen beyond, it increases the emphasis at that point. This vanishing-point, then, should be placed at one side of the center and also either above or below the middle. If there is a fine clouded sky and good trees the horizon may be placed low, whereas if the chief interest is in the curve of the road and the wayside-flowers it should be placed high.

The question of proper focus is a vital one for artistic effect. If a small stop is used it will be found that everything is shown with equal clearness and definition, and that is not the way they appear in nature. The effect of distance and atmosphere is to soften detail and cause objects to appear less distinct, and if a large opening is used and the focus set on the foreground there will be a gradual softening toward the distance, which more nearly represents the view as seen by the eye.

In taking figures this is also applicable. The human eye is a wonderful piece of mechanism and shifts its focus so instantaneously that we have the impression that we see everything in sharp focus at once — but this is not the case. Look at your friend, who stands some ten feet away, and while still looking at him see how much detail you can see in the trees some fifty

feet beyond him. If you shift your gaze to the trees the detail is there, but you cannot see it while looking at the nearer object. In taking a picture of the nearby object then the focus should be sharp on that object, but the background should be soft and indistinct, leaving no doubt as to the point in your picture at which you desire people to look.

Another important thing to consider in the making of a picture is the direction and quality of the light. The amateur habit of always taking things in direct sunlight and invariably having the sun at one's back must be ignored when it comes to making "pictures." The worst possible light for making outdoor-portraits is sunlight, at least until one is sufficiently master of one's technique to overcome the difficulties. A soft reflected light in the shadow of some building will give you sufficient illumination and do away with the almost inevitable scowl or squint induced by direct sunlight. And as for having the sun at one's back — supposing you look carefully at the best work of some pictorialists among your acquaintances, and it would not be surprising if you were to select as the best things there the pictures that were taken almost or quite toward the source of light. The long shadows falling toward the camera, the line of light outlining nearby objects and the luminous effect of the whole give a charm and poetic feeling that would be entirely lacking in the same view taken with a full illumination from behind the camera.

Simplicity is first, last and chief among the requirements of the real picture. In composing your subject see how much can be left out rather than how much may be included. It is surprising how much difference in the composition a little change of position will make. It pays to take time to look the ground over thoroughly before making your exposure. There is always a best viewpoint — be sure you have found it before exposing your plate.

The "masterpiece" of which one is deservedly proud is seldom an accident. One should be willing to give time and thought to getting everything as nearly at its best as possible. When a scene composes well but the light is not right, wait — or come again — observe it in different lights, even at different seasons of the year, and when at last the best conditions are obtained take your picture, and it will doubtless be one of which you may justly be proud.

## Photographing the Baby

PERHAPS there is no one subject on which more good photographic material is wasted than "His Majesty the Baby." He looks so adorable in his bath or playing about on the floor that his devoted family cannot resist the temptation to train the camera on him, and what a disappointment it is when the "finisher" sends back blank films with no baby visible.

It is next to impossible to secure any results from indoor-snapshots. A common delusion is that if the

FIRST PRIZE  
BEGINNERS' CONTEST



“WATCHFUL WAITING”

JAMES ALLAN

baby is placed in the sunlight a snapshot may be taken. The results are very spotty, to say the least, for the spots where the sun strikes are the only ones that take, producing an inky background with a ghostly hand or nose or ear the only visible indications of the figure.

As the little people are such lively subjects it is seldom possible to give any length of time to the exposures, so some other means must be devised. If a light background can be had, part of the difficulties are obviated. A room with light walls is a great improvement, for the light is reflected from all sides and the general illumination greatly increased in strength. When this is not available one must improvise a background from a white cloth of some sort. Care must be taken to have it well pressed, so that no wrinkles will spoil the effect. It should be spread on the floor and then raised at the back and fastened securely to some support.

If the sun shines into the room do not let it strike on the background or subject, but if by means of another white cloth or paper it can be reflected back into the face it may be a great help. Put the baby on the white

floor-cloth, which should be placed near a window, and with the lens at its widest aperture and the distance accurately set even a snapshot should give results. If, however, the camera be one that gives various speeds, give at least  $\frac{1}{5}$  to  $\frac{1}{2}$  second, and if the light is not very strong the only safe way to do is to place the camera, of whatever type, on some firm support and set the shutter on B (bulb). Then, at the critical moment, press the bulb or lever, and hold it a second or so, being governed by the stillness of the subject, and then release.

When available, however, a piazza or shaded corner outdoors will permit longer exposure and better results, though even here an ordinary snapshot is not adequate. If the shutter allows  $\frac{1}{5}$  or  $\frac{1}{2}$  second exposure that should be sufficient, varying according to light-conditions. If this is not possible the bulb-exposure should be used, giving about as short an exposure as is possible by that method. Care should be taken to keep the background simple, and as light in tone as possible, as that allows shorter exposure and is more appropriate for the little people.





## ANSWERS TO QUERIES



*Subscribers and regular readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Correspondence Department, PHOTO-ERA, 383 Boylston Street, Boston, U. S. A. If a personal reply is desired, a self-addressed, stamped envelope must be enclosed.*

R. S. P.—There are as you say many conflicting statements regarding the **correct time of washing dryplates and films** before drying. A considerable amount of investigation in this direction has been conducted by the Research Laboratory of the Eastman Kodak Company with the following results: (1) The rate of elimination of hypo depends very largely on the agitation given to the water, the rate being twice as rapid when the water is rapidly agitated as when stagnant. (2) The rate of elimination is practically independent of the temperature, no difference being observed between measurements made at 65°, 70° and 80° F. (3) The elimination is very rapid under all circumstances, the amount of hypo in the film being halved every two minutes if the film is left stationary, and every one minute if rapid agitation is ensured. Consequently, with complete agitation in an adequate supply of water, the film may be considered to be free of hypo in ten minutes, while if the agitation is less complete, twenty minutes is still sufficient. Opinions to the contrary notwithstanding, hardening with chrome alum, ordinary alum or formalin has very little effect on the rate of elimination.

O. L. B.—According to *The British Paper Trade Journal* the **stock of the best photographic paper** consists of pure rag, which should be free of iron and have an ash content not exceeding four percent. The breaking-strength of good stock averages 2,400 inches, the strength being about 2.4 percent. The dilation on moistening should be small, while it is necessary that the paper have a uniform appearance both by transmitted and reflected light. Premature yellowing may be traced to the use of decomposed animal sizing, inferior stock or the action of iron in combination with resinic acid.

J. S. C.—Whether  $3\frac{1}{2} \times 5\frac{1}{2}$  or  $4 \times 5$  is the **better size camera** is very largely a matter of personal opinion, although the nature of the subjects which it is used to portray and even the character of the country, if landscape is the aim, have a distinct bearing. The criticism of distortion in postcard-size is unusual, and this may be seeming and not actual, due to an excess of foreground in some instances. Certainly a

$6\frac{1}{2}$ -inch lens ought not to cause any distortion on a  $5\frac{1}{2}$ -inch film.

Although  $5 \times 7$  is very near the ideal proportions most favored by artists,  $4 \times 5$  has ever been an exceedingly popular size; perhaps the most popular. The shape must suit the subject, however, and the owner of a  $4 \times 5$  finds himself oftener trimming from the side, and of a postcard-camera from the end. The camera you mention will surely please you if you think it worth the monetary sacrifice to make the change.

You are right in assuming that a  $5 \times 7$  lens used on a  $4 \times 5$  plate would constitute a narrow-angle lens for that plate. The advantage lies in more nearly correct perspective, corresponding to what the eyes see without moving in their sockets.

F. C. B.—The **spots or streaks** on your negative may be due to one of several causes, which perhaps you will recognize as they are alluded to. Such a regular



A GLIMPSE OF THE RIVER

M. C. STILL

SECOND PRIZE—BEGINNERS' CONTEST

crop of spots of various irregular shapes in rather close formation over a considerable area are often due to stale developer. The stock-solutions may have deteriorated with age, the mixed solution may have stood too long before use, or, as in an instance like this, where the negative in question is the only one of several developed in the same developer, it may have been the last of too large a number to be developed.

If, however, as you state, all of the plates were developed at the same time, presumably in a tank, this regular unevenness or ripple formation resembling crocodile leather is probably due to failure to keep the solution of uniform density and somewhat in motion during development, by shaking the tank, stirring its contents or reversing a liquid-tight tank end for end at frequent intervals. Pyro, pyro-metol and metol-hydroquinone are the developers most likely to give offense in this respect.

Incomplete fixing, the result of taking the plate from the bath too soon, or of a greatly exhausted or very cold bath, may be the cause. If the fault lies in fixing there will be brown stains eventually if not already.



## PRINT-CRITICISM



*Address all prints for criticism, enclosing return-postage at the rate of one cent for each two ounces or fraction thereof, to Correspondence Department, PHOTO-ERA, 383 Boylston Street, Boston, U. S. A. Prints must bear the maker's name and address, and be accompanied by a letter, sent separately, giving full particulars of date, light, plate or film, stop used, exposure, developer and printing-process.*

Mrs. H. G. R.—Of your three prints "Fairy Tales" is the most pleasing and technically the best, although this lacks unity in that the girl is reading her book and the boy is looking into the camera.

"The Magnolia Tree" also lacks unity; the child has been placed very near the edge of the print and is looking out of the composition rather than into it.

"Posing" appears to be a flashlight, but in any case the plate suffers through too great contrast, partly, if not entirely, due to overdevelopment. The only satisfactory way to render whites by photography is with ample exposure and restrained development, usually short development with a considerably increased quantity of water or decreased quantity of reducer.

D. V. S.—In "A Pan-American Work of Art" the background is unfortunate, as the architectural lines of the tower are confused with those of the statue, which, we believe, might have been photographed from another viewpoint to better advantage.

"Goldfish" appears to be considerably underexposed, no doubt because of the movement of the fish, and the result is the decidedly unrealistic darkness of the draperies.

E. L. A.—Of your three prints "The Frozen Stream" is generally most pleasing—the crispness of winter-sunlight and shadow being very well rendered. Could the tree-trunk which cuts across the upper left-hand corner have been avoided, the composition would have been much improved.

"The Cloud Over the Sun" is well named; it certainly dominates the picture. Nevertheless a more pleasing result could be had by trimming this largest cloud entirely away and leaving a wide horizontal panel. Even then there would remain an excellent cloud-effect, occupying fully two-thirds of the picture-area, and the spacing of the whole composition would be improved.

"Winter Shadows" is excellent in its blue-black tone, but it seems to lack a center of interest.

H. J. W.—Your subject "Japanese Water-Lilies" is a striking composition, well arranged, but the subject would have been far more convincing if the water in which they grow were apparent.

"Autumn" appears to be enlarged, with a loss of detail and gradation, the nearest tree being decidedly out of focus and the effect of the light exceedingly peculiar. Two prominent trees when of almost equal importance might be expected to frame a distant vista of considerable interest, but as this is wanting the subject lacks unity.

L. E. H.—"The Path o' Dreams" is distinctly pleasing in its sunlight falling upon a little rustic bridge in the middle-distance, and had the foreground at the lower left-hand corner been defined a little more clearly the result would have been greatly improved.

A. S.—Trim away the image of the window, now the highest light in the print, from your child-study and the undivided attention of the observer will be focused upon the figure.

C. M. DEB.—In "The Graduate" you have a portrait which must be pleasing to the sitter and her friends, although we are inclined to criticize the hair-ribbons, now forming the highest light in the subject, which we believe should be reserved for the face.

A. A. C.—"Fleur de Lis" is a little lacking in definition and distinctness. The best way to improve it would be to lower the tone in the distant sky in the trees so as to concentrate interest upon the figure.

J. E. L.—Enlargement is necessary to make the most of such a subject as "Spring-Landscape," which impresses us as being decidedly a winter-landscape, with snow on the ground and no foliage.



"HIS COMPANIONS, INNOCENCE AND HEALTH,  
AND HIS BEST RICHES, IGNORANCE OF WEALTH"

THIRD PRIZE — BEGINNERS' CONTEST

WILLIAM J. WILSON



# Photo-Era Exposure-Guide

Calculated to give Full Shadow-Detail, at Sea-Level, 42° N. Lat.

For altitudes up to 5000 feet no change need be made. From 5000 to 8000 feet take  $\frac{3}{4}$  of the time in the table. From 8000 to 12000 feet use  $\frac{1}{2}$  of the exposure in the table.

Exposure for average landscapes with light foreground, river-scenes, light-colored buildings, monuments, snow-scenes with trees in foreground. For use with Class 1 plates, stop F/8, or U. S. 4. For other plates, or stops, see the tables on the opposite page.

*These figures must be increased up to five times if the light is inclined to be yellow or red. †Latitude 60° N. multiply by 3; 55° × 2; 52° × 2; 30° × $\frac{3}{4}$ . ‡Latitude 60° N. multiply by 2; 55° × 2; 52° × $\frac{1}{2}$ ; 30° × $\frac{3}{4}$ . §Latitude 60° N. multiply by $\frac{1}{4}$ ; 55° × 1; 52° × 1; 30° × $\frac{1}{2}$ . ¶Latitude 60° N. multiply by $\frac{1}{4}$ ; 55° × 1; 52° × 1; 30° × $\frac{1}{2}$ .	MONTH AND WEATHER																			
	JAN., NOV., DEC. †					FEB., OCT. ‡					MAR., APR., AUG., SEPT. ¶					MAY, JUNE, JULY §				
	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull
<p>11 A.M. to 1 P.M.</p> <p>10-11 A.M. and 1-2 P.M.</p> <p>9-10 A.M. and 2-3 P.M.</p> <p>8-9 A.M. and 3-4 P.M.</p> <p>7-8 A.M. and 4-5 P.M.</p> <p>6-7 A.M. and 5-6 P.M.</p> <p>5-6 A.M. and 6-7 P.M.</p>																				

The exposures given are approximately correct, provided the shutter-speeds are accurately marked. In case the results are not just what you want, use the tables merely as a basis and increase or decrease the exposure to fit the conditions. Whenever possible keep the shutter-speed uniform and vary the amount of light when necessary by changing the stop. Focal-plane shutters require only one-third of the exposures stated above.

**SUBJECTS.** For other subjects, multiply the exposure for an average landscape by the number given for the class of subject.

**1/8 Studies of sky and white clouds.**

**1/4 Open views of sea and sky;** very distant landscapes; studies of rather heavy clouds; sunset- and sunrise-studies.

**1/2 Open landscapes without foreground;** open beach, harbor- and shipping-scenes; yachts under sail; very light-colored objects; studies of dark clouds; snow-scenes with no dark objects; most telephoto-subjects outdoors; wooded hills not far distant from lens.

**2 Landscapes with medium foreground;** landscapes in fog or mist; buildings showing both sunny and shady sides; well-lighted street-scenes; per-

sons, animals and moving objects at least thirty feet away from the camera.

**4 Landscapes with heavy foreground;** buildings or trees occupying most of the picture; brook-scenes with heavy foliage; shipping about the docks; red-brick buildings and other dark objects; groups outdoors in the shade.

**8 Portraits outdoors in the shade;** very dark near objects, particularly when the image of the object nearly fills the plate and full shadow-detail is required.

**16 Badly-lighted river-banks, ravines, to glades and under the trees. Wood- interiors not open to the sky. 48 Average indoor-portraits in a well-lighted room, light surroundings.**

**PLATES.** When plates other than those in Class I are used, the exposure indicated above must be multiplied by the number given at the head of the class of plates.

# For Perpetual Reference

For other stops multiply by the number  
in the third column

## Example

As all the figures in the table opposite are based upon the use of stop F/8, or U. S. 4, it does not appear here among the ratios for other stops.

U. S. 1	F/4	× 1/4
U. S. 2	F/5.6	× 1/2
U. S. 2.4	F/6.3	× 5/8
U. S. 3	F/7	× 3/4
U. S. 8	F/11	× 2
U. S. 16	F/16	× 4
U. S. 32	F/22	× 8
U. S. 64	F/32	× 16

The factors that determine correct exposure are, first, the strength of light; second, the amount of light and dark in the subject; third, speed of plate or film; fourth, the size of diaphragm used.

To photograph an average landscape with light foreground, in Feb., 2 to 3 P.M., bright sunshine, with plate from Class 1, R. R. Lens, stop F/8 (or U. S. 4). In the table look for "Hour," and under the column headed "Bright Sunshine," note time of exposure, 1/16 second. If a smaller stop is used, for instance, F/16, then to calculate time of exposure multiply the average time given for the F/8 stop by the number in the third column of the table for other stops, opposite the diaphragm chosen. The number opposite F/16 is 4. Multiply  $1/16 \times 4 = 1/4$ . Hence, the exposure will be 1/4 second.

For other plates consult the table of plate-speeds. If a plate from Class 1/2 be used, multiply the time given for average exposure, F/8 Class 1, by the number of the class.  $1/16 \times 1/2 = 1/32$ . Hence, the exposure will be 1/32 second.

## Speeds of Plates on the American Market

Class-Numbers. No. 1, Photo-Era. No. 2, Wynne. No. 3, Watkins

Class 1/3, P. E. 156, Wy. 350, Wa.  
 Ilford Monarch  
 Lumière Sigma  
 Marion Record  
 Seed Graflex  
 Wellington Extreme

Class 1/2, P. E. 128, Wy. 250, Wa.  
 Ansco Speedex Film  
 Barnet Super-Speed Ortho.  
 Central Special  
 Cramer Crown  
 Eastman Speed-Film  
 Hammer Special Ex. Fast  
 Imperial Flashlight  
 Seed Gilt Edge 30  
 Wellington Xtra Speedy

Class 3/4, P. E. 120, Wy. 200, Wa.  
 Barnet Red Seal  
 Cramer Instantaneous Iso.  
 Defender Vulcan  
 Ensign Film  
 Hammer Extra Fast, B. L.  
 Ilford Zenith  
 Imperial Special Sensitive  
 Paget Extra Special Rapid  
 Paget Ortho. Extra Special Rapid

Class 1, P. E. 111, Wy. 180, Wa.  
 American  
 Ansco Film, N. C.  
 Atlas Roll-Film  
 Barnet Extra Rapid  
 Barnet Ortho. Extra Rapid  
 Central Comet  
 Imperial Non-Filter

Imperial Ortho. Special Sensitive  
 Kodak N. C. Film  
 Kodoid  
 Lumière Film and Blue Label  
 Marion P. S.  
 Premo Film-Pack  
 Seed Gilt Edge 27  
 Standard Imperial Portrait  
 Standard Polychrome  
 Stanley Regular  
 Vulcan Film  
 Wellington Anti-Screen  
 Wellington Film  
 Wellington Speedy  
 Wellington Iso. Speedy  
 W. & W. Panchromatic

Class 1 1/4, P. E. 90, Wy. 180, Wa.  
 Cramer Banner X  
 Cramer Isonon  
 Cramer Spectrum  
 Defender Ortho.  
 Defender Ortho., N.-H.  
 Eastman Extra Rapid  
 Hammer Extra Fast Ortho.  
 Hammer Non-Halation  
 Hammer Non-Halation Ortho.  
 Seed 26x  
 Seed C. Ortho.  
 Seed L. Ortho.  
 Seed Non-Halation  
 Seed Non-Halation Ortho.  
 Standard Extra  
 Standard Orthonon

Class 1 1/2, P. E. 84, Wy. 160, Wa.  
 Cramer Anchor

Lumière Ortho. A  
 Lumière Ortho. B

Class 2, P. E. 78, Wy. 120, Wa.  
 Cramer Medium Iso.  
 Ilford Rapid Chromatic  
 Ilford Special Rapid  
 Imperial Special Rapid  
 Lumière Panchro. C

Class 3, P. E. 64, Wy. 90, Wa.  
 Barnet Medium  
 Barnet Ortho. Medium  
 Cramer Trichromatic  
 Hammer Fast  
 Ilford Chromatic  
 Ilford Empress

Seed 23  
 Stanley Commercial  
 Wellington Landscape

Class 5, P. E. 56, Wy. 60, Wa.  
 Cramer Commercial  
 Hammer Slow  
 Hammer Slow Ortho.  
 Wellington Ortho. Process  
 W. & W. Process Panchromatic

Class 8, P. E. 39, Wy. 30, Wa.  
 Cramer Contrast  
 Cramer Slow Iso.  
 Cramer Slow Iso. Non-Halation  
 Ilford Halftone  
 Ilford Ordinary  
 Seed Process

Class 100, P. E. 11, Wy. 3, Wa.  
 Lumière Autochrome





# OUR ILLUSTRATIONS

WILFRED A. FRENCH



OUR cover-picture this month, and repeated on page 115, is a subject characteristic not only of Holland, but of many sections in this country, particularly in the state of Rhode Island, which is largely open to tidewater and favored by strong winds. The current version of this theme is a pictorial masterpiece of the Chicago Salon of 1903, and nothing so fine of a similar character has graced the walls of an American Salon of recent years. Mr. Blaine chose an extremely appropriate and picturesque setting for his windmill—typical scenery and weather-conditions. The sky, filled with hurrying clouds, forms an ideal background for the huge grinding-machine. The composition and treatment are all that can be desired. No data.

Although intended merely to illustrate a point in his account of a commercial photographer's daily work, the picture of a young woman at the forge—frontispiece—has a degree of pictorial interest. When one remembers that interiors of workshops, laboratories and kitchens were favorite themes of the old Dutch painters, it is somewhat strange they do not seem to tempt the photographer's pictorial skill. One reason for this probably is the multitudinous and miscellaneous detail that usually characterizes subjects of this character. But these scattered objects are less objectionable when they reflect the minimum of light; besides, the place would not be less typical if some of the more distracting objects were removed temporarily. "At the Well," pictured so successfully by Joseph B. Kahill in August PHOTO-ERA, is a good example of the artistic treatment of such prosaic themes, and where, ordinarily, kitchen-utensils are left carelessly about. Their presence annoys no one, to be sure, except the critical eye of the artist, who disposes of them as his judgment shall dictate. Thus, in Mr. Walter's picture, there is nothing to disturb the general character of the place, and the interest is confined to the fire and the comely assistant. This picture, as well as the three others of this series, exemplifies the faultless skill and taste of the versatile Mr. Walter.

The school-group, page 106, demonstrates conclusively that an ample exposure of a subject that is marked by extremes of contrast is eminently desirable. One needs only to note that every face, dress and gown, as well as the ivy-covered building forming the background, has its true color-value.

William S. Davis, being a professional painter as well as a photo-pictorialist, can always be relied upon to supply material of practical value to the student in pictorial photography. His dissertation on bridges is one of his most creditable efforts, and each illustration is an admirable example of pictorial and individually consistent interpretation. Each picture represents a type, and the series virtually exhausts the subject. Other kinds of bridge-structures will be found in PHOTO-ERA for December, 1912, when bridges formed the subject of one of the most successful PHOTO-ERA competitions ever held. Data: "The Bowing Arch," page 108; August, 3.45 P.M.; cloudy light; stop, F/8;  $\frac{1}{100}$  second; Inst. Iso.

"Steel-Lace," page 108; August, 6.45 A.M.; gray light; taken from a passing steamer; Ilex lens; stop, F/6.3;  $\frac{1}{100}$  second; Wellington Anti-Screen; clouds added from separate negative.

"The Little Foot-Bridge," page 109; on a cloudy winter day, 4.15 P.M.; rear-combination of an Ilex anastigmat, and wide-open (stop, F/10, effective); 10-inch focus; 8-time ray-filter; 4 x 5 Roebuck D. C. Ortho plate.

"The Bridge-Tower," page 110; August, 1915, 10.40 A.M.; single achromatic lens; stop, F/11;  $\frac{1}{60}$  second; Cramer Inst. Iso; print, enlarged from portion of negative.

"Under Construction," page 111; August, 1915, 6.30 A.M.; gray light; taken from a passing steamer; Ilex lens; stop, F/6.3;  $\frac{1}{100}$  second; Wellington Anti-Screen plate; clouds added from separate negative.

"High Bridge, New York," page 112; summer, about 3 P.M.; dull gray light; Ilex Anastigmat; stop, F/8;  $\frac{1}{100}$  second; Cramer Inst. Iso; clouds from another negative.

"A Park Vista," page 112; summer, 1.20 P.M.; Ilex lens, at F/6.3;  $\frac{1}{8}$  second; Cramer Inst. Iso. A subject of this kind is rendered best by the use of a double-coated non-halation plate and a rather deep ray-filter, owing to the long scale of tones presented; but not having such a combination with him when the subject was located, Mr. Davis had to do the best he could with the materials at hand.

It is not often that a waterfall against such a somewhat trying setting as dark foliage is so well rendered as the Helen Hunt Falls, page 114. The usually opaque black masses are absent here, and the interest of the falls is centered upon the descending waters and the adjacent rocks, without a shock. The little foot-bridge, in the foreground, is a characteristic feature of the scene, and adds to rather than detracts from the main interest. Lovers of "Ramona" doubtless have an affectionate regard for the author, Helen Hunt Jackson, who lies buried on the top of Cheyenne Mountain, Colorado. The beautiful waterfall, named in her honor, is situated in the North Cheyenne Cañon, near Colorado Springs. Data: August, 1915, 6 P.M.;  $\frac{1}{8}$  second; Stanley Commercial; glycin; print, Azo E. Hard; hydro-metol.

One of the most interesting forms of entertainment that has been offered in these pages is the comical arrangements of prepared grasshoppers as explained and illustrated by Lehman Wendell, pages 116 to 122. The unconscious insects are as pliable in the hands of the artist as the painter's lay-figures, and, as Mr. Wendell states, the variety of poses and groupings is unlimited. PHOTO-ERA readers owe a debt to Mr. Wendell for having disclosed the secret of his procedure, thereby making it possible for any camera-user to entertain himself in a similar way, although it does not follow that he can practise the method commercially or for profit. As I understand, each of Mr. Wendell's arrangements is copyrighted, and so is his method.

Through the courtesy of W. H. Rabe, we again present one of his rare pictorial souvenirs of the San Francisco Exposition of 1915. This same subject has invited the ability of many a visiting camerist; and although in not a few instances this beautiful fountain has been depicted with adequate skill by photographic experts, it has not been interpreted so felicitously as by Mr. Rabe, several of whose Exposition pictures have been published in PHOTO-ERA, and have been deservedly admired. Data: the same as have been already given in these pages.

Mr. Langland's landscape, page 125, is of the decorative kind, and very pleasing. Here the principles of composition do not prevail, hence the artist is free to follow his fancy, and in defiance of criticism unless he violate the rules of good taste or craftsmanship. Data: June 25, 10 A.M.; bright light;  $3\frac{1}{4} \times 5\frac{1}{2}$  Premo Film-Plate camera; Zeiss-Kodak lens; 6-inch focus; stop, F/6.3; 3-time color-screen;  $\frac{1}{10}$  second; film-pack; pyro, in tank; Cyko contact-print.

Take away our humorists and life would be dull, indeed! W. R. Bradford, whose versatile gifts have been praised in this department more than once, comes to us, very personally, this time: for it is his very self, portrayed in the character of the village politician, holding forth on some political topic, at the post-office or the corner-grocery. He is criticizing the administration for failing to deliver PHOTO-ERA to every subscriber in the United States the day after it has been published. He does not believe in long delays in forwarding such an important publication. Or, maybe, he is discussing with his hearers the question of one-cent postage, in which he is a firm believer. The picture is remarkable from the fact that it is a clever bit of photography — the pose, lighting and definition being highly meritorious, and, in the making of it, Mr. Bradford had no assistance. Data: 4 x 5 Cycle Graphic camera; 5-inch Cooke lens; stop, F/5.6; electrical flashlamp; 5 grains flash-powder; W. & W. Panchromatic plate; pyro-acetone, in tank; enlarged on Instanto Matte; self-posed; shutter and flash operated by foot on bulb.

### Advanced Competition

THE contest of prints in which the element of speed should be depicted yielded a goodly number of successful efforts. Nevertheless, not a few entrants interpreted speed as merely quick motion, such as slow dancing, children at play, etc.

Many of these were interesting as to subject and workmanship, but they failed to convey the idea of great rapidity of motion, such as shown in diving, horse-racing and automobiling. The efforts of those camerists is appreciated deeply, and I regret that the subject was not fully grasped by these earnest and painstaking workers. But though these contributions to this somewhat taxing competition failed of official recognition, they will answer other, and, perhaps, more important ends, for some of the entries were manifest records of exceedingly interesting events in social and sporting life.

As PHOTO-ERA readers have already discovered, George Krause understands the art of picture-making. His artistic nature asserts itself every time he takes his camera in hand, for it means that the result will justify the expectations of his friends. Whether by intention or by training — this genial picture-maker is as unknown to me as hundreds of other worthy contributors — Mr. Krause treats his pictorial themes with an artistic precision that is as refreshing as it is rare. This characteristic is evident in his prize-picture, "A Dangerous Curve," page 129. How judiciously the moment was chosen to arrest the hurrying machine! Note the happy placement of the group of onlookers, and the admirable proportions of the entire pictorial plan. The artist chose this locality because it offered a plain and effective setting for a far more impressive theme than the conventional view that includes scurrying contestants amid great clouds of dust, a vast concourse of spectators, long stretches of road and fences and other concomitants. Data: June, 1916, 4 P.M.;  $2\frac{1}{2} \times 3\frac{1}{2}$  Ica Bébé camera; Zeiss Tessar Ic; stop, F/4.5;  $\frac{1}{20}$  second; Seed's Non-Hal. Ortho; print on Enlarging-Cyko; developed with M. Q. tubes.

A speeding passenger-train is a threadbare subject, I confess; but the effort of Charles C. Smith, presented on page 130, was so exceptionally meritorious that the jury overlooked the lack of novelty. The perspective of the locomotive and the line of cars is quite admirable, as is the spacing of the whole. Data: June 14, 1913; diffused light; Eastman Speed Film;  $8\frac{1}{4}$ -inch Goerz Dagor; stop, F/6.8;  $\frac{1}{40}$  second; pyro in film-tank; print on Enlarging-Cyko; developed with hydro-metol. The engineer in the cab of the engine shown in this photograph has just retired after fifty-four years of service, having run the New York Central's fastest trains without an accident or hurting a single person. He informed Mr. Smith that he was going about sixty-five miles per hour when this picture was made. This is Mr. Smith's first picture with a 3A Graflex camera.

The humor of Mr. Jordan's photograph is convincing and contagious, and is augmented by the thought that "Watchful Waiting," or "The Worst is yet to come," suggest themselves as fitting titles, in case the artist's inventive faculty failed him. The element of realism, as it concerns the canine's exhalation and the ejected supply of water, is presented forcibly, and, what is also pleasingly true, nothing has been neglected in this camera-stunt that would call for an apology, as is often the case in snapshots. Data: July, noon; full sun; 5-inch Sylva lens; stop, F/6.8;  $\frac{1}{25}$  second; Cramer Inst. Iso; pyro in tank; enlarged on Wellington Cream Crayon.

### Beginners' Competition

THE charming genre, page 135, is considerably in advance of anything James Allan has done photographically. His efforts, heretofore, have been only partly successful, one second prize and two third prizes, in the Round Robin Guild competitions, having been accorded them. This time he captures the first prize. "Watchful Waiting" breathes the spirit of genuine spontaneity, and, unlike many similar compositions, it betrays no elaborate preparation, nor a personal interest in the photographer's activity. The picture is admirable in its component parts, the trusting child forming an excellent foil to the dangerous-looking, though muzzled, bull-terrier, though the latter may have acted in the character of a protector. The fact that the child is clothed in black from head to foot, thus taking its place in a picture that spells harmony and unity, is also worthy of notice. Data: March, 1914, 10.30 A.M.; bright; 4 x 5 Reflex camera; 7-inch Goerz Celor; stop, U. S. 4;  $\frac{1}{25}$  second; Hydra plate; Duratol, tray-development; enlarged print on Montauk Bromide.

The river-view, page 136, is very engaging, showing the camerist's appreciation of attractive picture-material and taste in composition. Unfortunately, like many of his fellow-workers in a similar situation, Mr. Still was confronted with the perfectly natural condition of a reflected sky, which, in photography, is not always easy to deal with. To subdue it — as can easily be done in the first development or by a local reduction — is not desirable, unless the corresponding part of the sky is dark enough to warrant such a procedure. One way is to mask it, or to break it up by means of nearby bushes, reeds or grasses, provided the light come from the opposite side. Numerous illustrations of this expedient to provide an unobtrusive and helpful foreground may be found in back numbers of PHOTO-ERA. A less important matter is the slightly tilted water-line; but this is corrected easily by trimming the print. Data: June, 3.30 P.M.; semi-bright light; 5 x 7 Premo;  $8\frac{1}{2}$ -inch B. & L. R. lens; stop, U. S. 8;  $\frac{1}{2}$  second; Eastman Portrait-Film; pyro-acetone, Cramer formula; Cyko print; hydro-metol; 12 seconds; Welsbach light.

(Continued on page 152)





# ON THE GROUND-GLASS

WILFRED A. FRENCH



## The Imported Camera

A WELL-KNOWN amateur was showing to a group of friends in Chicago, recently, an up-to-date 4 x 5 Reflex camera of English make which he had just received from London. He explained its various adjustments and the little difficulty he had to procure such a fine model at a bargain-price. But he was reticent about one thing, viz., the actual cost of the complete camera. Determined to find out, however, a friend who had remained in the background during the demonstration now came forward and questioned the camera-owner, and the following dialogue ensued:

"Might I ask a few pertinent questions, without being rude?"

"Why, yes; fire away."

"What is the catalog-price of the outfit?"

"Thirty-nine pounds sterling for camera and three double plateholders. The cash-price is thirty-four pounds. But these prices include no lens."

"That lens looks like a Zeiss anastigmat."

"Yes; it's an F/4.5 Ross-Zeiss Tessar  $7\frac{1}{10}$  inch focus, listed at eight pounds, London; but fifteen percent is now added to the English and the American price, on account of the war."

"Pardon? — Yes; it came fitted to the camera."

"And you bought it, camera and all, only slightly used, from a dealer?"

"Yes; a friend ferreted it out for me."

"What did the expressage amount to, from London to Chicago?"

"About eight dollars, I should say. As I remember, the foreign charges, including expressage, insurance and consular invoice, amounted to \$13.50, and a United States revenue-stamp, fifty cents."

"And the import duty?"

"Just twenty-five dollars."

"What is the rate?"

"Fifteen percent on camera with lens. On the lens, if it comes separately, the rate is twenty-five percent; it used to be forty-five."

"Did you make your own custom-house entry?"

"No; a custom-house broker did that for me. His charge was \$3. I could have saved that easily if I could have spared the time."

"Were you long getting the outfit?"

"It arrived about four weeks after I mailed the order."

"You've got a swell outfit — no doubt about that!"

"You're right. It's a dandy bargain and suits me perfectly. I've saved the price of the lens, alone."

"Thanks, awfully, old chap. I may try the same thing myself soon."

During the cross-examination the camera-owner had unwittingly disclosed the first cost of the outfit; for \$25 at fifteen percent duty, gives \$167 — the amount all desired to know. Total cost, about \$209.

## An Unsuspected Cause of Failures

QUITE a while ago a friend handed me a box containing a number of glass negatives that were totally black from overexposure, with the request to ascertain the cause. As my friend went to Japan, shortly after, taking his camera with him, the matter was forgotten;

but on his return home, recently, it was revived. He brought back several hundred successful exposures, and about thirty failures just like those he had handed me a year ago. He thus had lost a number of interesting subjects and, naturally, was not overhappy.

Although I had several theories regarding these mishaps, I thought to facilitate the discovery of their origin by observing my friend operate his camera. It succeeded. The thing was simple enough. The shutter to his folding camera is an old-style automatic. For a prolonged exposure — set the lever at T. Press the bulb once, to open the shutter; a second time, to close it. But my friend, being a nervous and impulsive individual, and very precise in all he does, had the habit of pressing the bulb several times, in quick succession, apparently to make sure that the shutter was closed at the end of the exposure. As a result, his shutter would open and close, or close and open, according to the way he worked it, and, as it is quite apparent, it remained open a good many times! And thus the seeming mystery was solved.

## Returning Salon-Prints to Owners

THE art of packing merchandise with a view to safe transportation, regardless of distance — which German exporters know to perfection — still remains a sealed book to many American tradesmen. Not wishing to be outdone in this respect, committees in charge of photographic exhibits would do well to give this matter some thought, for certain secretaries have given cause to be remembered by the very careless manner in which they pack prints returned to contributors.

The last Pittsburgh Salon, in particular, will not be remembered gratefully by exhibitors whose pictures were packed so badly, or rather not packed at all, that they reached their owners in a seriously damaged condition. I have seen two very valuable multiple gum-prints that were returned enclosed in an ordinary manila envelope backed by two pieces of spongy corrugated board. Being sent by mail, the two prints were literally broken in two, being completely ruined. The owner tells me that never again will he exhibit in an American Salon.

## Reversal of Pictorial Emphasis

A MISTAKE that is neither common nor intentional — but is curious, nevertheless — is the reversal of the emphasis in a pictorial composition. Of the examples that come to mind — among the hundreds of photographic subjects that the mail brings to these offices each month — is a picture of a waterfall. The exposure was made when the sunlight came from the side, throwing the mass of descending water into deep shadow, but brightly illuminating the rocky sides of the fall, when the reverse, with the light coming from the proper direction, would have been consistent and more pleasing.

Another represented a figure standing in the ivy-fringed entrance of a summer-house. Whatever the cause, the former was blurred, all over, whereas the surroundings were uniformly sharp. Naturally, the opposite of this effect was what the camerist probably desired; but careless focusing or movement of the figure during the exposure marred the result.



# EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication



## Thirty-Sixth Annual Convention

### Photographers' Association of America

Wigmore Coliseum, Cleveland, Ohio, July 24 to 28, 1916

PHOTOGRAPHERS from almost every state, from Canada and Mexico, together with manufacturers and dealers, numbering over thirteen hundred, were in attendance at the thirty-sixth annual convention. "Look pleasant, please" was the watchword, and certainly every one enjoyed himself to the limit on the good things provided by President Dozer and his able staff. Something was doing all the while.

As a slight token of the esteem in which President Dozer is held, those in attendance presented him with a large silk American flag. A chest of silver and a portrait of Mr. Dozer were given to Mrs. Dozer. Mr. Carl Ackerman, Mr. Juan C. Abel and Mr. Chas. L. Lewis made the presentations.

The election of officers resulted as follows: Ryland W. Phillips, Philadelphia, president; Chas. L. Lewis, Toledo, first vice-president; Howard D. Beach, Buffalo, second vice-president; G. L. Hostetler, Des Moines, treasurer; John I. Hoffman, Washington, D. C., secretary.

The secretary's salary was raised to \$2,400, if, in the opinion of the executive committee, the association can afford this.

The selection of the next place of meeting, by resolution, was left to the executive committee. It is to be held some time in the latter part of September or early October, and as far away from Cleveland as the boundaries established two years ago would admit.

The program was published in the June issue.

### Demonstrations

The demonstrations were unusually attractive and brought out many new things. Those who were selected to instruct their fellows did so cheerfully, and gave fully of their ripe experience. Edward H. Weston advocated using a small portable camera and then enlarging these negatives up to the size desired. Small cost of production, more natural and life-like pictures and portability were given as the desirable features. In his studio-work he used a spot-light to get cross-lighting effects with good results. Lightings were arranged as usual, and the light from a Mazda, Blue Bulb, 100-watt lamp was used to direct the light from the back. The light was filtered through two thicknesses of black mosquito netting. His "bread and butter" work is of the class that is unusual in most studios.

The demonstrations by Pearl Grace Loehr were also out of the usual. She believed also in the portable camera and the taking of the subjects in their own environment. She showed herself very clever in posing children, and recommended that only fresh toys, strictly sanitary in character, be used. "No mother feels safe to have her darling handling the unclean." A quiet manner and genuine love of children were given as prime requisites to success in photographing them.

Geo. W. Harris proved himself a whirlwind under the light, and demonstrated that photographers, as a rule, take too much time with a model, thus destroying responsiveness and character. He made ten different positions in less than that many minutes. He advocated

using at least twelve plates on each model, and if that would not yield the right expressions, to use as many more. Orders will result only from proofs showing the real man or woman, and more is gained from studying the rejected proofs than from those which are accepted. He finds that a pose showing the hand in close proximity to the head invariably results in an order; that a person sitting on the edge of a chair is more graceful than one sitting farther back, and that the lap is shown in better perspective; also that the head should be as far as possible from the lap.

Emme Gerhard favored "mental pictures"—those showing mental activity and interest. She preferred poses out of the ordinary, those full of action and not stereotyped. An assistant was recommended whose duty it was to arrange the model, when necessary. The artist's work was to keep the model interested and bring out responsive expressions. Miss Gerhard's particular line of work just now is what might be termed the tempest photography, showing the spirit of the wind by aid of woman's loveliness. Much of Miss Gerhard's work is made across from the light. One of her most valued hints was that photographers arrange with their florists to take all full-blown flowers that are of little value, yet when used as accessories in the studio make for better pictures and more cheerful surroundings.

Chas. L. Lewis advocated arranging the model, when necessary. He preferred to do this himself. His creed is to play with the children; be gallant to the ladies; be strictly business-like with the business-man, and in love with old age.

Clifford Norton's demonstration of outdoor-photography, at the park, was both novel and profitable. It opened up a great avenue for thought for the portraitist, and no doubt will start many a man on the road to better things and more prosperous times. His work is distinctive and exquisite in beauty of line and light.

B. G. Heiser gave an able demonstration in commercial work, and showed how not to do it as well as how it should be done, and exhibited pictures illustrating each class. Stop F/64 was recommended, and a lens of about 26-inch focal length was favored. Higgins' waterproof black ink was used, sprayed by means of an air-brush, on cut glass and highly polished objects of this order. Putty and gold bronze were also recommended. He favored non-halation plates for great contrasts and color-sensitive plates for colored objects. A tent in which to place objects to be photographed was considered a great aid to perfection, allowing soft, uniform lighting and riddance of objectionable reflections.

The demonstrations of Walingier, Towles, Schneider, Moore, Townsend and Bill were full of meat for the thinking photographer, and along the lines previously outlined, principles being the same, methods only differing.

### Lectures

"Personality in Business," by Anderson Pace, Chicago, was much appreciated, in that it gave the true secret to success. He advised working through friendships for business rather than by direct, disinterested solicitation. Discouraged all premiums and ticket-





CONVENTION-GROUP AT WIGMORE COLISEUM, JULY 26, 1916

business. "Premium-business leads to cut-throat competition." "Coupons take the quality out of business and make the transaction a bribe." "Too much standardization of prices not conducive to confidence, but price figured on cost of production plus a fair profit inspires confidence." Soliciting business supposed to come through clubs and societies is questionable and unworthy of the decent photographer. In advertising, newspaper cards are of little value, it is personality that counts. Children are the photographer's best asset, and motion-picture films of children at play one of the best stimulants for trade. Go to their homes and inspire confidence by clean behavior. Keep close to customers, and take a genuine interest in them and their affairs, and thus hold trade.

"The Photographer as a Business-Man," by C. H. Claudy, brought out some gems as follows: "2 to 5 percent of income should be spent on advertising;" "the cheapest man in town makes the poorest work;" "everything about you and your place is representative of your business;" "copy department-store methods in store-fixtures and advertising;" "handle your product as you would valuables, and inspire respect;" "people value things just to that extent that value is placed on them;" "a successful sale is the termination of a series of steps leading to that sale, and any false step lessens the successful issue just that much;" "profits should be figured on selling-cost and not cost-price of the article;" "discounting one's bills, 2 percent ten days equals 72 percent per year, and one can afford to borrow of the banks at that rate;" "the money in business lies in repeat-sales and not in transient trade;" "it is good business always to deliver the pictures whether paid for or not;" "most people want to pay their bills, and then most bills can be collected by law; anyway, pictures are valuable only to the one having them made;" "have customers call for work and do not deliver by carrier;" "do not use the superlative in advertising; big claims are not believed by the public;" "do not surround your business with mystery;" "be liberal;" "eliminate waste;" "use brain instead of brawn;" "do not mix manufacturing and sales; have a business-person in the reception-room;" "the head of the business should be the business, and menial work should be left to cheap help."

"Direct-by-Mail Advertising," by Mr. Tim Thrift, was charted and divided into personal appeals as follows: "Appeal to pride, matter of record, new parenthood, present to relatives, consolation at loss, child to exchange, important occasion, happiness, retrospection, duty to children, consolation, congratulation, commemorating occasion." Personal letters were outlined having these themes as their talking-point, and were sent, sealed and with two-cent stamp, either to the parent or addressed direct to the prospective patron.

Illustrated Lecture, "Art-Principles as Applied to Photography," by Edward Lake. This was a series of illustrations from paintings and photographs which was criticized from the standpoint of art. The make-up of a picture was ably pointed out, and consisted mainly of locating the focal center, placing center of interest above focal center, balancing around focal center and arranging lines or accessories below focal center so that one could travel around focal center and not jump from one point of interest to another; arrangement of interest in groups and setting off the picture by suitable background. He urged photographers to make pictures of persons doing something, having just done something or just about to do something.

Illustrated Lecture, "Building a Business," by W. H. Bass, was largely a charted schedule of costs, overhead-profit, etc., and taught one thing, that no man can truly conduct a paying business unless it is conducted on close business-lines.

The Symposium and Query-Box, conducted by D. E. Alger, brought out the following: "Circular letters, satisfied customers, clean windows and place, neat stationery and frequent change of samples of work are the best advertisements;" "best investments for photographers are life-insurance, building and loan, and discounting one's bills;" "in arranging for groups, it is best to make one person responsible for payment, give concession in price if paid for at time of posing or charge more if order is placed later;" "give picture to one who solicits or is responsible for the order;" "in making the most of one's advantages, the show-case should be well illuminated every night, displays should be made on every occasion at fairs, gatherings, etc.;" "in the reception-room a business-head or salesman should





CIRKUT PHOTOGRAPH BY MILLER & HEISER CO., CLEVELAND

preside." Names suggested to take the place of "operating-room" were studio, posing-room, camera-room and skylight-room; the "darkroom" was changed to laboratory. In the matter of retouching, as little as possible was recommended, and that little so done that the natural grain of the flesh was not destroyed; mechanical stipple was discouraged. In the discussion as to where our coming photographers were coming from, it was recommended, that no apprentice be taken who did not have a knowledge of chemistry and physics; uneducated persons were not wanted, photographic schools were recommended as best places for one to get fundamental training, and photographers of high moral and artistic standing as the best finishing-school.

This report would not be complete if it failed to mention the splendid work done by Katherine Jamieson, Mabel Cox Surdam and Clara Hagins in the "Reception-Room." They demonstrated, without a doubt, that it takes the "eternal woman" to get the orders. Their work was both profitable and highly entertaining.

#### The Art-Exhibit

The Art-Exhibit was one of the largest, if not the largest, shown in recent years, due partly to the fact that much that was educational was a part of the exhibit. Over 800 prints were cataloged, exclusive of the New England Exhibit, Middle Atlantic States Exhibit, Salon Exhibits for 1914 and 1915, Exhibit of International Notables by Harris & Ewing, Complimentary Exhibit by Cleveland photographers, The Towles Exhibit and Reclamation Exhibit by the U. S. Government. Including these various exhibits would make approximately 3,500 prints, and, taken together with the displays made by the manufacturers, would swell the total to at least 10,000 pictures — truly a gigantic display. All pictures submitted were hung this year, which no doubt might lead some to conclude the exhibit was not up to standard; but, as a matter of fact, the exhibit of 1916 was fully twenty percent better than last year. All pictures were rated, the maximum rating being placed at 85. The highest rating given, however, was 83. Fifteen pictures were added to the Salon, as follows: No. 534, firelight-portrait in red tone, by E. E. Doty, Battle Creek, Mich. No. 290, well-modeled head of child, by F. S. Jacks, Muskegon, Mich.

No. 28, childhood depicted in all its innocence and charm, by Mary L. Smith (Women's Federation), Binghamton, N. Y. No. 367, one of Dudley Hoyt's (N. Y.) brilliant portraits of a beautiful woman. No. 147, impressionistic treatment of dignified old age, by Strickler Studio, Pittsburgh, Pa. No. 41, head, treated as a painting, having coarse canvas-finish, by Pasquale S. Cullotta, Baltimore, Md. No. 137, conventional treatment of man with violin, by Geo. J. Kossuth, Wheeling, W. Va. No. 581, child-life admirably rendered, by C. R. Reeves, Anderson, Ind. No. 87, rather somber treatment of age, by H. Lee Bell, Pensacola, Fla. No. 239, severe masculine head, handled in just the right way to bring out strength and character, by James W. Porter, Youngstown, Ohio. No. 269, portrait of lady, glass-backed print, very effective treatment and scintillating with light, by I. Buxbaum, Brooklyn, N.Y. No. 196, showing beautiful and tender treatment of old age, by Jane Reece (Women's Federation), Dayton, Ohio. No. 531, showing beautiful motion and light, handled as only a Weston can, by Edward H. Weston, Tropico, Cal. This makes the third consecutive year Salon-honors have been awarded to Mr. Weston. No. 374, showing old age at the close of life, delicately handled, by A. O. Titus, Buffalo, N. Y. No. 653, landscape showing wonderful tonal qualities and feeling. A good example of the height to which one may aspire through the medium of photography.

The Salon-Exhibit compares very favorably with those of 1914 and 1915, and some of these are wearing admirably, despite the fact that ideas and ideals are ever advancing. These exhibits, however, are showing the effect of rough handling by moving from place to place, and something should be done to preserve them.

The Interpretive Class showed much of what might be termed the poetry of photography. Some were very ambitious and much overdrawn, and we will do better when we realize that our art possesses limitations.

The Ex-Presidents' Exhibit was a credit to the high-art ideals held by these gentlemen, and was a very valuable addition to the exhibition.

The Commercial Exhibit was large and good, and showed to what extent our national association may grow in importance by coöperation of the various interests of our profession.



The 44 portraits of Past-President Towles, by as many different photographers, were interesting in the extreme, and no one dares say that we do not possess individuality. Truly, Mr. Towles may well be pardoned if he fails to pick out the original Towles, the real man from among this collection. This goes to show that often times personality or character is sacrificed for pictorial effect.

Commenting briefly on the Portrait-class as a whole, one must admit that sunlight-effects and cross-lightings are popular; that worked-in backgrounds are not so startling and show better drawing; sepia prints and pictures in low tone are favored; coarse canvas-effects in finish are being used to a greater extent; frames are being used close up to the print; dark backgrounds are more in vogue than light, sketchy effects, and outdoor and home-portraits or home-portrait effects, in the studio, are in the lead.

The Reclamation-Exhibit was a revelation to the portraitist, and makes one feel that, after all, portraiture is a small part of photography. This exhibit was an education in itself, showing almost every phase to which photography can be employed for a better country and more prosperous and contented people. All that was needed to drive this fact home was a place on the program for a lecture on this exhibit, explaining the different uses made of our work and methods employed by the government.

#### The Women's Federation

This organization grows in importance year by year, and we believe, as Past-President Harris says, that the photographers of the future are coming from the ranks of the Women's Federation. This organization now numbers about 150 members, a gain of 60 new members being made in only two days of the convention. Two of the members, Mary L. Smith and Jane Reece, were given Salon-honors by the judges, and two members were selected by the board to give demonstrations, namely, Pearl Grace Loehr and Emme Gerhard. Twenty-seven had pictures on display in the art-exhibit.

The officers elected for 1917 are Mamie Gerhard, St. Louis, president; E. Blanche Reineke, Kansas City, first vice-president; Josephine MacAvoy, Buckhannon, W. Va., second vice-president; Harriet Edna Oonk, Cincinnati, secretary and treasurer.

#### Manufacturers and Dealers

The manufacturers' and dealers' exhibit was on an elaborate scale and fully up to the standard of former years. The Wigmore Coliseum lent itself admirably to the purpose, and as all exhibits were on one floor no one was at a disadvantage. No general scheme of decoration was followed, as heretofore; but this allowed each exhibitor to exercise an individuality not possible otherwise, and certainly great taste was displayed by all, and especially by the AnSCO and Eastman Kodak Companies. These booths were both large and very beautiful, and always thronged by visitors viewing the work by the best photographers in the profession; in fact, it was generally conceded that the paper- and plate-exhibits by the various manufacturers were fully up to and on a par with the art-exhibit in artistic excellence, and surpassed it from a commercial or business standpoint. The AnSCO Company was housed in a magnificent pergola profusely hung with wistaria, and the booth of the Eastman Kodak Company was of chaste and classical design. Other booths worthy of special mention were Cramer Dry-Plate Co., Hamner Dry-Plate Co., Central Dry-Plate Co. and the De-Mo Photo-Paper Co. The Cramer exhibit was unique, be-

ing of Futurist design, and something out of the ordinary not heretofore shown. Altogether, we may well be proud of our manufacturers and dealers. No better or more progressive men are in any profession. Liberal in their business-policies and firm supporters of our national association. Those in attendance follow in alphabetical order:

The Albany Card Mfg. Co., Albany, N. Y. Card-stock. Represented by Mr. Pilon.

Alexander Bros. Co., Pittsburgh. Represented by U. V. Long and R. C. Seddon, showing a general miscellaneous line of photo-goods, including Sterling Amateur Finishing-Tanks and Halldorson Flash-Lamps.

The AnSCO Co., Binghamton, N. Y. Represented by Pres't T. W. Stevens; Mgr. Geo. W. Topliff; See'y and Treas. A. C. Lamoutte; Convention-mgr. W. A. Rockwood; L. D. Field of the main office; W. B. Mussen, mgr. of New York branch; C. H. Anthony, mgr. of St. Louis branch; J. L. Condon, Paul E. True, S. E. Surdam, Frank N. Leache, E. S. Burtis, Olva Rye, R. W. Stafford, A. H. Hansen, C. H. Devenny, Guy Cubley, W. S. Etchison, R. W. Madlener and Jack Brushwood, London Representative. The outdoor-photographs on Cyko by W. H. Towles, C. H. Davis and Alice Broughton deserve mention, although it is well-nigh impossible to pick any one exhibit as being better than another; all were excellent, and go to show that the AnSCO products allow of the widest treatment in the interpretation of artistic ideas by master-photographers. This firm also showed the new Print-Enlarger, Contact-Printer and New York Studio-Cameras.

The Barston Co., Cincinnati. G. H. Barnum and C. McGrane. Showing new sensitive Chloride Fabrics both durable and fine in texture and artistic appearance. The Barston Toning-Solution for cold-bath sepias or black and white was also shown.

Bausch and Lomb Optical Co., Rochester, N. Y. E. A. Taylor. Showing full line of Optical Instruments and Lenses, relieved by fine mural exhibit of photographs.

The Blodgett Photo-Machine Co., Hicksville, Ohio. C. A. Blodgett. Contact-Printer, endorsed by Ohio-Michigan Photographic Association.

Eduard Blum (see Photo-Art-Shop, Chicago).

California Card Mfg. Co., San Francisco. H. L. Burd, M. M. Frey and W. L. Leonard. High-art cards for the discriminating photographer.

E. V. Campbell Mfg. Co., Richmond, Ind. E. V. Campbell. The new Multiple-fuse Portable Skylight Fool-proof Flashlight-apparatus.

Central Dry-Plate Co., St. Louis. E. F. Long, vice-pres't, Floyd M. Whipple and W. A. Griesedieck. Some very fine work, made on Centrals, was shown by Goldensky, Gerhard Sisters, Witzel, of Los Angeles, and R. C. Nelson. The latter was represented by the first-prize picture shown at the recent Dealers' Convention, and Witzel showed a beautiful picture of that very attractive camera-subject, Mary Pickford. Visitors received metal pocket-pencils in the form of a rifle-cartridge, bearing the legend, "Do your 'shooting' with Central Dry-Plates."

Chicago Photo-Mount Co., Chicago. M. E. Menz, vice-pres't, and Chas. H. Kirschner. "Faultless Folders" were shown by this enterprising card-stock company.

The Chilcote-Sargent Co., Cleveland. A. H. Chilcote, Geo. H. Sharp, B. R. Pascal, Frank J. Fugent and W. A. Hatch. An elaborate showing of card-stock filled the booth. Twenty-five dollars in gold and twenty-five dollars' worth of card-stock was given the lucky one whose key opened the small iron chest. This proved to be the biggest advertising-feature of the

convention, and a constant stream of photographers visited this booth to try their luck.

Colegrove Bros., Buffalo, N. Y. Harry Colegrove, Geo. Wisch and B. Waterman. High-class portraiture in both oils and watercolors. Much interest was shown in the 40 x 60 watercolor of Pauline Frederick, by Titus.

A. M. Collins Mfg. Co., Philadelphia. J. T. Fenner, sec'y and treas., M. A. T. Gilbee, mgr., Jas. J. Hood, J. M. Evans, Rall Javens, M. Schofield and H. K. Harriman, sales-mgr. The complete new fall line of mountings was shown and attracted unusual attention.

Cooper Hewitt Electric Co., Hoboken, N. J. S. H. Knapp, sales-mgr., C. N. Knapp and W. T. Ringer. Commercial and studio-lighting equipments, for which this company is famous. Among the literature distributed to visitors, and keenly appreciated, was the firm's pamphlet, "Portrait-Lighting with Mercury-Vapor Lamps," written and illustrated by the Gerhard Sisters. A copy will be mailed to any one who is interested.

The Cordova Shops, Inc., Buffalo, N. Y. W. F. Eifert. Leather display-albums and leather photo-card-cases, beautifully embellished and carved. The display was really high-class in every particular.

The Courson Automatic Flashlight Co., Barberton, Ohio. E. S. Crosby and Thomas Evans. This lamp is something new in studio flashlight-apparatus. It is entirely automatic, fires twelve charges without reloading and is provided with smoke-exhaust.

G. Cramer Dry-Plate Co., St. Louis. F. E. Cramer, G. A. Cramer, Giuseppe Dorella, Alfred W. Moody, J. J. Sheets, H. F. Brown and J. W. Beattie. The wives of most of the men were present and added much to the gay appearance of the "Futurist Booth." They also greatly assisted in extending true hospitality to the visitors. Twenty-three of our best-known pictorialists had examples of their work, on Cramer plates, hung in this exhibit. A very useful and valuable souvenir was presented to each caller—a leather, loose-leaf pocket-book of formulae.

Cuyahoga Picture-Fram Co., Cleveland. A. E. Icove. Art-mouldings and frames were shown.

The De-Mo Photo-Paper Co., Columbus, Ohio. G. W. Murdock, Francis Moling, Cora Plant and Frank Stevens. Work by Reinhart, Sweet, Moore, Bill, Beach, Baker Art Gallery, Stein and Lee Bros. was shown in De-Mo and De-Mo Sepia in their several grades.

Eastman Kodak Co., Rochester, N. Y. The Paper Division was represented by Harry M. Fell, convention-mgr., E. R. Nichols, J. P. Schafer, Ed. J. Arthur, Ed. C. Millard, W. H. Sheets, Joe di Nunzio, T. Chapel, John Zarley, E. W. Countryman, H. E. Niles, R. W. Barbeau and Al. Larrimer. Fourteen of America's foremost art-photographers had large displays on Royal Bromide, Artura Carbon Black, the New Bromide Fabric and other sensitive papers. A large and very superior display was also made by the Cleveland Photographers using E. K. Co. products. This display was an education within itself and set a high standard for the photographers of the country.

Eastman Kodak Co., Plate and Film Division, was represented by the following: A. W. Allen, mgr. of the Plate-Division, L. B. Jones, H. C. Reiner, Frank Emminger, L. V. Tournier, H. B. Wills, E. B. Campbell, N. P. Richardson, Frank Hieock and Deforrest Stamp. Many developing-room accessories were shown, all of the practical nature which stamps Eastman products. A very fine display of transparencies, together with the original negatives, was a convincing argument of the superior nature of Eastman's films and plates. The Research Department of the company, ably

presided over by Dr. C. E. Kenneth Mees, was a new departure in convention-exhibits, and attracted much attention especially by the thinking, scientific worker. J. H. C. Evanoff, K. K. Huse and L. A. Jones assisted Dr. Mees in showing and explaining the various exhibits of color photo-micrographs of stained medical pathological sections. Tone lantern-slides, photographs of the major planets, in different colored lights, measurements of gradation of printing-papers and shutter-testing instruments, lens-testing methods, tests or measurements of surfaces of papers, methods of testing sharpness of images or spread of light, etc., etc.

The Professional Materials Division of the E. K. Co. was represented by H. F. Hoeffle, H. Fincke, Al. Smith, J. Potter and Paul Favour. This exhibit included everything needed in the studio in the line of special apparatus, and was without doubt the most complete ever shown, including new 7 x 11 View-Cameras, Home-Portrait Outfit and Stand, Revolving-Back Enlarger, No. 4 Print-Dryer (improved), etc., etc.

The office-force, consisting of F. S. Noble, C. F. Ames, A. H. Paul, C. H. Ruffner, F. O. Strouger, C. L. Swingley, Chas. W. Burley, Harry H. Tozier, W. H. Lewis, H. C. Sievers, Chas. S. Hutchinson and L. B. Jones, were also present and helped to make every one have a good time.

The Fowler & Slater Co., Cleveland. H. M. Fowler, P. R. Slater, Geo. Bard, J. Landis, E. J. Crozier, S. H. Clark and A. C. Gorsuch. Exhibits of particular note were Special Studio Flash-Cabinet, Flashing-Signs for advertising-purposes, Rounds Spot-Light for the new cross-lighting effects, tapestry backgrounds and Rex Print-Washer.

C. P. Goerz American Optical Co., New York. A. H. Beardsley. No lenses were shown, but the booth was hung with examples of work taken with Goerz lenses. The booth served as a rest-room for patrons.

The Gross Photo-Supply Co., Toledo. Rudolph Gross, Oliver Gross, Irving Gross and Frank Tiernan. Full line of attractive mountings and specialties.

Gundlach-Manhattan Optical Co., Rochester. Henry Turner and Paul W. Schanz. The new Home-Portrait (square bellows) Camera was shown and full line of Turner-Reich lenses, as well as folding cameras and collapsible home-portrait tripods.

The Herbert & Huesgen Co., New York. Chas. H. Huesgen and W. H. Morgan. Their Duplex Rotary Automatic Print-Dryer was very favorably received. This is a practical necessity for the photographer who has much finishing to do for the trade, and is, without doubt, one of the big things introduced in recent times. The Auto Fixt Focus Camera was also shown and attracted much favorable comment for simplicity of operation.

The Haloid Co., Rochester. R. A. Williams, F. Godfrey and Frank Hearn. Quality and tone characterized the work shown on this sensitive media by Garo, Bachrach, Schang, Clark and Williams.

The Hammer Dry-Plate Co., St. Louis. Richard Salzgeber, sec'y, W. B. Hammer, H. G. Salzgeber, C. O. Towles, G. M. Eppert, F. S. Sloan, C. W. Taylor, Clifford Reckling, C. Shafer, N. A. Corning and C. O. Fowler. The "Hammer Boys" had the distinction to carry off the bulk of the prizes offered by the association for the demonstrator or representative who got the most members for 1916. This speaks louder than words for the spirit towards the association held by the Hammer Dry-Plate Co. Their booth contained choice examples of artistic photography by Breckon, Hollinger, Phillips, Ellis, Towles, Townsend, Sykes and other distinguished artists. A fine bronze paper-cutter was given their friends as a mark of their favor.



Hess-Ives Corporation, Philadelphia. Represented by Henry Hess, pres't, N. H. Gellert and W. G. Fitz. Much has been said of photographs in the colors of nature; but it has remained for the Hess-Ives Corporation to show the first color-positive photographs on paper in this country at a national convention. The print-exhibits were by Elias Goldensky, Dr. Arnold Genthe and Martin, Inc. By means of the new "Hiblock," which consists of two plates and N. C. Film, treated so as to do away with color-filters, one can make in his own studio, with his own apparatus, genuine color-photographs on paper, in any quantity, and in size up to 11 x 14. The prints have a most pleasing pictorial quality of slight diffusion-effect, and selected examples were hung in the art-exhibit.

Kathol Mfg. Co., New York City. Represented by Dr. Chas. J. Thatcher, inventor and president of the company, and F. Harry Hall, long identified with the introduction of coal-tar developing-products in America, who, on account of his acquaintance with the photographic trade and personal popularity, will act as sales-manager of the company. This new developing-agent has remarkable powers — a solution made up over a year still possessed full developing-energy, and, although slightly colored, did not stain the print in the least.

Geo. L. Koehne, Toledo. R. B. Lennox, Jas. Care and Arthur Kitson. Tapestry grounds on Krex Rug material were shown, and attracted favorable attention for their artistic appearance and durable nature. These fill a need for really artistic grounds.

The Kroner Photo-Print Dryer Co., Chicago. Mgr. E. A. Kroner. This is a compact little print-dryer of exceptional capacity, and will dry thoroughly any size of print in two to six minutes. Its capacity is three thousand 4 x 5 prints per hour.

G. A. Ley, Chicago. G. A. Ley, inventor of the Ley Collapsible Skylight, a flash-lamp of unusual merit for all-around flashlight work.

The H. Lieber Co., Indianapolis. Robert Lieber, P. W. Houseman and E. T. Biechler. This enterprising company had space merely to meet its friends.

The Medick-Barrows Co., Columbus, Ohio. F. C. Medick. Artistic photograph-mountings, exhibiting an individuality particularly appreciated by artists of taste.

Michigan Photo-Shutter Co., Kalamazoo. Mrs. L. M. Henshaw. This exhibit ever keeps the old reliable Packard Ideal Shutter before the profession. A new attachment for fitting the shutter to lenses of different sizes was shown for the first time, and fills a long-felt want.

Mueller Bros., Chicago. H. R. Beals. Hand-carved and made frames, exhibiting unusual care and taste in design.

National Carbon Co., Cleveland. W. R. Mott, E. H. King and M. Bethea. "White-Flame Carbons" for photographers, photo-engravers and printers in such installations of various lamps as the Wohl, Allison & Hadaway Panchroma, Bogue, Macbeth and Scott. A model studio was one of the attractive exhibits of this company; the exposure required for a portrait — one sixteenth second.

National Lamp Works of the General Electric Co., Nela Specialties Division, Nela Park, Cleveland. C. R. Stover, R. E. Hayes and L. C. Kent. A full line of Mazda Lamps, together with a studio-installation for portraiture and Safe Darkroom-Light. An automatic lighting-display showing installations in large cities with Mazda lamps attracted considerable attention.

Pcoria Association of Commerce, Peoria, Ill., had an attractive booth fitted up as a rest-room in which they entertained their friends and boosted Peoria for 1917.

Mr. C. W. Dull, mgr. of the convention-bureau, was the host, and had a proposition to place before the convention that would have been worth their while.

The Photo-Art-Shop, Chicago. Eduard Blum. Portraits in oil, watercolor, sepia and in gum. The new "Luminous" and "Sketch-Class" were very attractive, and the large oil-painting of our presidential candidate, former Justice Hughes, attracted more than usual attention. This exhibit is always one of the principal attractions of the convention.

The Poynter Automatic Photo-Lamp, Cincinnati. W. B. Poynter, Wm. E. Mayer and E. J. Reiss. This is a new idea in flash-lamps, and the work shown by this apparatus certainly bids fair to rival studio-work. It is automatic, and will fire one to twelve cartridges without reloading.

Presto Mfg. Co., East End, Pittsburgh. S. S. Loeb and W. Scott. Duplex Printing-Machines were shown for the first time. They possess great merit. Of course, the Infallible Tinting-Masks, made by this company drew their usual share of attention.

Rex Robinson Furniture Co., Grand Rapids. Mr. and Mrs. C. B. Robinson. Children's accessories were added to the full line of studio- and posing-furniture for which this company is noted.

Simplex Photo-Products Co., New York. B. J. Nasief and W. O. Hotte. A full line of Simplex specialties, including the Northern Light, Multiflex Enlarging-Lamp for Kodak-Enlarging, Film-Printer and Alamo Motion-Picture Camera, taking from fifty to one hundred feet of film.

Henry Seligman & Co., Milwaukee. H. Seligman, Jr. Leather frames and novelty photo-holders of excellent design.

The Shoberg Co., Sioux City, Iowa. D. C. Shoberg and B. C. Shoberg. The old original Shoberg Portable Skylight in a new dress, which adds greatly to its appearance and reduces the weight considerably. With the sure-shot ignition of this flash-apparatus and new improvements, it is a winner. The fine enlargements of family-groups shown proves its worth to the practical home-portrait worker.

The Southern School of Photography, McMinnville, Tenn., was represented by W. S. Lively, the president, who met old friends and made new ones by showing the work of post-graduates.

Sprague-Hathaway Studio, Boston. Represented by Jewel S. Jewel and C. E. Wallis, gen. mgr. This exhibit is always a feature of the convention, and this year was no exception. A very beautiful exhibit was of watercolor and oils on the new E. K. Co. Bromide Fabric. Transparent oil-paintings provided another new exhibit, and resembled stained glass in effect. This company also showed strictly hand-modeled frames to suit a particular picture, no two alike. This is distinctive, and the first to be displayed at a convention. A magnificent portrait of President Dozer was also one of the strong attractions of this exhibit.

Stanley Bros., Grand Rapids. C. A. Stanley and Jack Stanley. The original Stanley Backgrounds were shown for the first time in years by the originators. The new Gray Tone Sketch-Grounds were particularly attractive. Tapestries and the old Seavey effects had many admirers.

The A. A. Stone Co., Cleveland. A. A. Stone and R. F. Stone. Enlargements in watercolor, sepia and black and white. A very creditable exhibit.

The Strathmore Co., Providence, R. I. Wm. F. Kilkenny. An entirely new line of silver Strathmore metal frames. A very attractive exhibit, and a frame of lasting qualities, adding a touch of refinement to any photograph.

Taprell-Loomis & Co., Chicago. W. L. Harris, supt.; J. A. Cameron, pres't; J. C. Schulz, treas.; F. L. Seyler, M. E. Sholl and W. E. Earp. The new fall line of mountings was shown, also leather photo-holder novelties. This exhibit always sets a high standard and, moreover, maintains it. No other company does more to assist the photographer increase his business by display-case business-getters.

Willis & Clements, Philadelphia. W. J. Markley. This company is doing its best to maintain the position occupied by W. & C. Platinotype, and has substituted Satista and Satoid, two printing-in papers similar to Platinotype, in either black and white or sepia finish. The Japine Silver, a printing-out paper introduced about a year ago, is also giving satisfaction.

Wollensak Optical Co., Rochester. Mr. H. C. Gorton, gen. mgr.. J. A. Dawes and Geo. H. Hawks. A full line of Wollensak Lenses, including the new series I Velostigmat, a double anastigmat, triple convertible, working at F/6.3; an ideal lens for all-around work. The celebrated Optimo Shutter, of course, occupied the place of honor in the shutter-display. The new Antinous-Release Studio-Shutter was also shown, and was considered by many practical workers to be a decided improvement over the old bulb and tubing by which to make exposures. Perhaps the greatest claim to distinction by this popular company, however, was the fact that the two principal demonstrators, Mr. Edward H. Weston, of Tropico, Cal., and Miss Pearl Grace Loehr, of New York, used Wollensak lenses in both their demonstrations — a fact not so strange when it is known that they also use these lenses at home in their studios.

The F. Zimmerman Co., Cleveland. Chas. C. Houser. Showing a general line of frames and mouldings for the artistic photographer. Their exhibit was large and of exceptional merit, and attracted the attention of the photographer who desired something exclusive for his patrons.

#### The Photographic Press

The press was well represented by *Abel's Weekly Bulletin of Photography*, *The Camera* and *PHOTO-ERA* — publications ever ready in their support of the Photographers' Association of America. *Abel's* was represented by Juan C. Abel, Chas. Abel and Mrs. O. P. Myers; *The Camera* and *Bulletin* by Frank Chambers, Mrs. Chambers and Mrs. M. Hertel; *PHOTO-ERA* by Wilfred A. French, Eliza Wood and David J. Cook.

#### Prominent Photographers Present

President L. A. Dozer, president-elect Ryland W. Phillips, vice-president-elect Charles L. Lewis, H. M. Hollinger, William H. Rau, Theodore Marceau, E. J. Giffin, E. E. Doty, D. D. Spellman, Ben Strauss, Charles Walinge, L. S. White, J. Zweifel, W. S. Lively, H. Scherree, B. Frank Moore, George W. Koehne, J. Mitchell Elliott, William Shewell Ellis, J. Anthony Bill, L. J. Buckley, J. L. Cusick, F. H. Curtiss, T. Kajiwara, Frederick Pohle, Professor David J. Cook, W. H. Bass, H. Hesse, E. E. Seavey, Homer T. Harden, R. W. Holsinger, association secretary Jno. I. Hoffman.

Of past-presidents, the following — in the order of their tenure of office — J. S. Schneider, C. M. Hayes, S. L. Stein, Geo. M. Edmondson, J. G. Nussbaumer, C. R. Reeves, Geo. G. Holloway, Frank W. Medlar, A. T. Proctor, Geo. W. Harris, Ben Larrimer and W. H. Towles.

And the following women-photographers: Miss Reineke, Pearl Grace Loehr, Emmc Gerhard, Mary Gerhard, Mabel Sykes, Mabelle Goodlander, Mrs. S. E. Surdam, Jane Reece, Harriet Edna Oonk and Miss Reith (J. L. Strauss Studio).

#### A Neglected Opportunity

Few of the hundreds of members of the P. A. of A. who walked past the new and beautiful art-museum, on the way to the lawn where, Wednesday afternoon, Clifford Norton and Mitchell Elliott posed and photographed a family-group (Mrs. Elliott and her three children), had a conception of the importance of its contents. The Publisher — after witnessing the demonstration — hurried back to the museum, which he found to contain a large and valuable collection of paintings by old and modern masters and of nearly every school.

He has wondered ever since why an afternoon had not been set aside by the board for a visit to this beautiful temple of art, which displays notable examples of portrait-painting by Rembrandt, Hals, Ter Borch, Goya, Allori, Van Dyck, Reynolds, Raeburn, Romney, Gainsborough, Hogarth, Lawrence, Copley, Stuart, West, Healy and Fuller, the study of which would have proved a valuable experience to the photographers that attended the convention. Nevertheless, several photographers, including Lewis, Ellis, Curtiss and Scherree, embraced the opportunity and were well repaid for the effort.

#### Flashlights

Portrait-photographer H. J. Gutierrez, with wife and child, Mexico City, Mexico, was probably the farthest member to attend.

About eighteen Canadian photographers were in attendance.

H. W. Immke, Princeton, Ill., seventy-seven years old, was probably the oldest photographer in attendance.

A committee consisting of all past-presidents, with Past-President Stein, chairman, was appointed to decorate the graves of our past-presidents, E. E. Decker and James F. Ryder, whose burial-places are in Cleveland.

It seems that H. Scherree, Worcester, and F. H. Curtiss, Hartford, were the only New England photographers present.

Seven hundred and seventy-four new members were enrolled by traveling representatives of the different manufacturers and dealers, first, second and third prizes being awarded as follows: first, to C. O. Towles, Hammer Dry-Plate Co., St. Louis; second, to Nate A. Corning, and third, to Cliff Reckling, also of the Hammer Dry-Plate Co.

The association has approximately a membership of 2,600, about 1,300 of whom were in attendance at the convention.

Although the weather was not favorable for dancing, by far the largest crowds of any gathering assembled each night to indulge in this popular pastime.

The boat-ride on the lake was much enjoyed. It was a welcome retreat from the heat of the day.

Cedar Point certainly drew the crowds, and is an ideal place to spend a vacation. Most in attendance took this in.

The Symposium and Query-Box conducted by "Whirlwind" D. E. Alger, of Van Wert, Ohio, was popular, and brought out much food for thought. This should be a feature of all future conventions. The demonstrations by Edward H. Weston and Pearl Grace Loehr won highest praise. Both were very practical and were given minute attention.

Holding the entire exhibit on one floor was very convenient; but the business suffered both through the noise and division of attention between the manufacturers' displays and the sessions. It was extremely difficult for the speakers to be heard.

Is the National Association going begging for a place in which to meet? It would seem so from the meager number of bids.



Dudley Hoyt, the gifted portraitist of New York, was suddenly taken ill with appendicitis when nearing Detroit, *en route* to Cleveland. He was rushed to the hospital, in Detroit, and underwent a successful operation. A message received by PHOTO-ERA, from Cambridge, N. Y., August 8, read: "Came up to the country, Monday [August 7]. Feeling fine." Congratulations!

Among the others missed at Cleveland was Frank Scott Clark, of Detroit. He was taken ill a few days before the convention, but is recovering.

Col. M. J. Steffens, the veteran photographer, of Chicago, was confined to his yacht by illness. Colonel Marceau left the convention to pay him a visit.

Pirie MacDonald, than whom the association has no greater patriot, was unable to attend, because of military duties.

In place of the conventional button, the committee provided a small, rectangular metal frame — worn as a badge — in which the name of the wearer was inserted, serving as easy identification.

On account of indisposition, caused by the oppressive heat, Mr. L. B. Jones, head of Eastman Advertising Department, was unable to deliver his much-anticipated lecture, "Studio-Advertising."

William H. Rau has added to his reputation as one of the most versatile photographers in the country the distinction of being the originator of very "nifty" monthly postcard calendars — twelve different pictorial subjects a year. It is good advertising, and also makes Mr. Rau's competitors green with envy.

The amount of \$50 in gold — or rather \$25 in cash and \$25 in card-stock — was awarded to H. E. Spaulding, Ithaca, N. Y. His lucky key unlocked the little gilded safe in Chilcote & Sargent's booth.

When Mojonier, photographer, of Los Angeles, and six feet four inches tall, met F. M. Marquis, of the Columbus Photo-Supply Co., who is only four feet six inches tall, there was a sensation. They represented the extremes of individual height at the convention.

Is three days enough time for the convention? Four, at least, would do, as the convention was virtually over on Thursday. The saving in expense would be quite an item.

The usual outdoor convention-group was made and proved to be a good one. Seeing is believing, and the assertion, made by an observing member, that the ladies were conspicuously numerous at this year's convention, would seem to be irrefragable. The group was made by I. A. Miller, of Cleveland, for the Miller & Heiser Co., with a No. 10 Cirkut Camera. The print measures 10 x 46 inches and is composed of only 675 persons. The heat of the day kept many away.

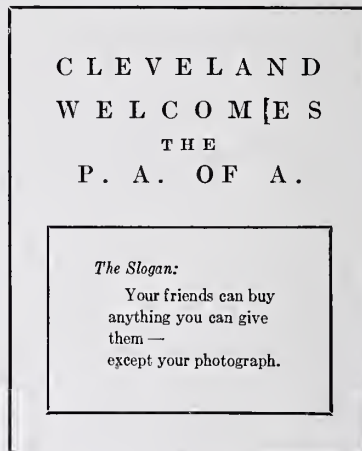
George M. Edmondson, as an independent host, kept his own automobile in front of convention-hall ready to take members to his studio. Quite a number availed themselves of Mr. Edmondson's hospitality.

### A Great Advertising-Scheme

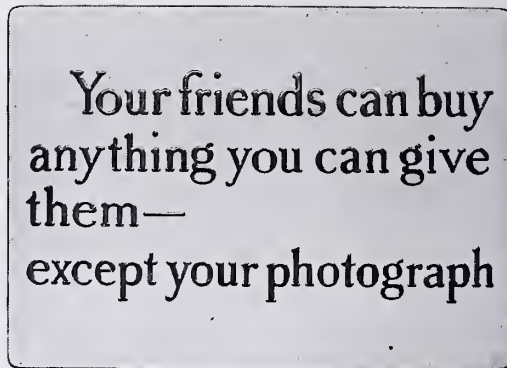
THE advertising done by the Eastman Kodak Company before and during the convention in the interests of the profession, in general, deserves the highest praise. It was done on an enormous scale, without seeming regard to expense, was unique and, certainly, extremely effective.

For some time past, the company has been advertising its original slogan, "Your friends can buy anything you can give them — except your photograph," in their own publications, in popular magazines and elsewhere. In the current issue of the *Saturday Evening Post* this same slogan, followed by their phrase, "There's a photographer in your town," appears as a

full-page advertisement, for which the publishers ask and get \$5,000! Every newspaper in Cleveland, before and during the convention, contained the announce-



This same greeting, in the form of a neat poster, 36 x 48 inches, and placed on an easel, was prominently displayed in the lobbies of the hotels, in the railway-stations, theaters and department-stores. A large white card having the same slogan was suspended conveniently in every guest-room of every hotel. Printed in gilt-embossed letters on a heavy gilt-edged card, 10 x 18 inches, the slogan was placed in every exhibit, alike, in the convention hall. Also, one was sent to every professional photographer in the United States and Canada, for display in his studio.



This remarkable publicity-campaign, inaugurated and maintained by the Eastman Company, so far as it concerned the Cleveland convention was brought to a close in a social way. The slogan, "Your friends can buy anything you can give them — except your photograph," had been set to music, and during the festivities at Cedar Point, July 28, was sung by an Eastman chorus, swelled by hundreds of volunteer-voices, to the tune of "When Johnnie comes marching home."

Truly, this altruistic campaign to promote the photographic business puts all previous efforts, from any source, in the shade, and credit should be given unstintingly to Mr. Spencer B. Hord and Mr. L. B. Jones, of the Eastman Company, for originating and developing the idea, and putting it into practice.



SINCE last writing, both the Salon and the Royal Photographic Society have issued prospectuses of their forthcoming exhibitions. That of the Royal (their sixty-first annual show) is on much the same lines as in the past, and is to be housed in the galleries of the Royal Society of British Artists, Suffolk Street, S. W. There are three sections. No. 1, Pictorial Photographs; No. 2, Color-Transparencies; No. 3, Scientific and Technical Exhibits, Color-Prints, Natural-History Photographs, Lantern-Slides and Stereoscopic Transparencies. A. L. Coburn has joined the judging-committee for the Pictorial Section, and is to work with H. E. Corke, J. H. Gear, J. Dudley Johnston and W. L. F. Wastell. The exhibition, of course, is international, and opens on Monday, August 21.

The Salon prospectus contains one or two novelties. The first condition of entry sets forth that "*pictures must not be framed.*" No. 4 states that the mounts should be approximately of the following sizes, 15 x 12, 20 x 16, or 25 x 20, and it is suggested that white or light-toned mounts be employed wherever possible. On the entry-form a space is devoted to the setting out of an agreement, one paragraph of which records the exhibitor's willingness to hand over one-half the proceeds of the sales, if any, of his pictures, to the Red Cross Society; but this clause may be crossed out if desired. All the pictures will be shown under glass. Altogether, we think it is a very good war-prospectus, and is likely to attract a great number of entries, as much work is taken off the shoulders of the exhibitor. The exhibition is to be held, as usual, at the Galleries of the Royal Society of Painters in Water-Colors (Pall Mall East) from the 16th of September to the 14th of October, both dates included.

A singular sign of the times is an appeal by the Committee of the R. P. S. for helpers. The professional assistants previously employed are now either in the army or otherwise engaged, and members are asked to come forward and fill their places in unpacking and hanging, and in entering particulars and cash received in the registers, etc.

In spite of it being war-time, and the very crisis, as we believe, of the war, "*Practicus*," of *The British Journal of Photography*, has just published (Henry Greenwood, 6d. net) a very useful little book called "*The Portrait-Studio.*" A dull subject, probably, thinks the reader, and we must confess that we opened the book with somewhat the same idea. But the writer is an expert on his subject, and, in spite of preconceived prejudice, one's interest is quickly kindled in ridge-roofs, vertical lights, diffusing-screens and general equipment. The book is of first-rate importance to professionals; but also amateurs who are attempting serious portrait-work can pick up many useful wrinkles and tips, for the information given is obviously the outcome of years of experience in what, undoubtedly, is a difficult subject. To give the reader an idea of how "*Practicus*" loads his words with stimulating and informative thoughts, we cannot do better than quote a short paragraph from his chapter on lighting, which, if carefully thought out, might lead the beginner to discover the causes of his often defective lighting:

"There are, however, a few axioms which may be borne in mind. One is that light admitted at the sitter's end of the studio gives brilliancy, whereas that coming from the camera end gives softness. A top-light gives sunken eyes, shadows under the cheek-bones and a generally haggard expression. Too low a side-light

takes all the character out of the eyes, and too much front-light gives a flat picture."

It is somewhat curious how little professional photography has been affected by the war. There is small demand for the most luxurious type of photographs at high prices, but in war-priced prints business is very brisk, all over the country. So much so is this the case that Mme. Lallie Charles (Curzon Street, Mayfair) has made arrangements to undertake the training of a few women in her own studio, with a view to their becoming professional photographers. The idea is to ground the students well in every branch of the work as practised in the Lallie Charles Studio, from the manner of taking, right through to retouching the negative and mounting the print. This is useful work; for when the war is over there will be many women who must earn their own living; persons, such as officers' widows, with perhaps a small income, but not enough private means to keep them in comfort; and for many such photography might become a suitable career, if only they have had a certain amount of preliminary training.

Telephotography is likely to come into its own through the war. The many and various uses to which a magnifying-lens may be put advantageously at the front are obvious. This new field has stimulated invention and experiment, and reports of the possibilities of a micro-telescopic lens used in conjunction with a fixed prismatic periscope, are said to be little short of incredible.

We were coming away from the Little Theater in John Street, Adelphi, and had a spare half-hour, so we bethought us of the Camera Club whose dignified premises are next door. We guessed we should find some sort of exhibition; but that it would be a photographic one was by no means certain. Our luck was with us, however, and we found an excellent show on view by the Earl of Carnarvon. The prints are mostly portraits, good straightforward work, and decidedly interesting effects of lighting. One could learn many lessons from them; but one fact struck us that Lord Carnarvon uses his lighting-schemes rather whimsically. He plays and experiments with them in a fascinating way, but always more to the advantage of his effect than the sitter. In looking at Lord Carnarvon's work, it struck us afresh what a tremendous lot there is in lighting, and how it should be altered virtually for every sitter. If professionals would take this trouble, surely they would save themselves an immense amount of retouching. The words of the little *Portrait-Studio* are very true.

It sounds perhaps rather crude to say so, but we were cheered that an earl could do such good work, experience having taught us to distrust the standard of photography when linked to a title! Like those of art and literature, the cleverest exponents of photography do not belong to the highest in the land. A book of snapshots, published by a royalty, brought this sad fact rather home to us not so long ago.

The Snapshots From Home League is still being carried on, in spite of the fact that every one is busier than ever. The idea of presenting its workers with a diploma is certainly sound, and we hope that there will be plenty of these interesting reminders after the war is over. The design is to be the work of a well-known artist reproduced in two colors on vellum. The workers who send in their claims, of course, will have to furnish proof of services rendered, and some date in September will be fixed, later on, for the diplomas' delivery. Meanwhile, members have time to pile up a little more work and make their obtaining a diploma a certainty.

Since our troops have been gaining ground in France, a good many snapshots from German homes have



come into our hands, many of them accompanied by German letters which, to those who have known and loved the German people, make pathetic reading. Several have been sent by the English Tommies to their relations here. One or two have been brought to us—a young girl sitting at a table looking at a framed photograph, a woman and little child in stiff attitudes and two little solemn, round-headed boys. Of the letters that were found with them, we have given written translations, for the benefit of the village people who had received these photographs, and being touched by them had wished to know more of the writers. Much as we all hate the makers of war, these photographs and letters, so simple, patient and sad, only evoked sympathy for the German people. The English waggoner's wife looks at the photograph of the German Frau who laments in her letters the four wet days for the hay-harvest, and feels puzzled—but this is not photography!

### Our Illustrations

(Continued from page 141)

Triptychs, such as Mr. Wilson's landscape, page 137, are very decorative and pleasing when artistically executed. The design is somewhat suggestive of pictures and altar-pieces of the early Dutch and Italian painters. Usually the wings or side-sections, attached to the center-piece, differ in design, but are similar in character, and all three really form an harmonious whole. This idea is illustrated in a beautiful way by Katherine Bingham's Easter picture, that appeared in March PHOTO-ERA, and in April as a cover-design. In Mr. Wilson's consistent effort there is repose, balance and unity, without straining after effect. Data: May, 2.38 P.M.; fairly bright light;  $2\frac{1}{4} \times 3\frac{1}{4}$  Icarette camera;  $3\frac{1}{2}$ -inch Carl Zeiss Icar lens; stop, F/9; 4-time color-screen;  $\frac{1}{50}$  second; Eastman N. C. film; Kodak powders, in tank; print, on P. M. C. Bromide.

### Dr. William Simon

DR. WILLIAM SIMON, of Catonsville, Md., professor of chemistry at the College of Physicians and Surgeons at Baltimore, died July 20, at Eaglesmere, Pa. He was born in Germany in 1844.

Dr. Simon practised photography, his chief diversion, with enthusiasm, and when Lumière's process of color-photography was introduced, in 1907, he became an ardent autochromist, producing plates of unusual beauty and accuracy. Among his early achievements in this branch of photography was an autochrome of a rainbow, the first successful one ever taken. He was also the author of several valuable treatises on color-photography.

### The South California Camera Club

WE learn from W. C. Sawyer, librarian of the South California Camera Club, of 626 South Hope Street, Los Angeles, Cal., that this organization has fine quarters on the fourth floor in the Lyceum Theatre building; also a large studio with skylight, exhibition- and reading-room, darkrooms, etc. The club has recently finished a very successful first annual exhibition, which included among many worthy pictures several that were shown at the Pittsburgh, London and Toronto salons; also notable prints by W. C. Sawyer, mentioned favorably at the Wanamaker spring-exhibition, and by E. H. Weston, that have received various official honors elsewhere. The salon pictures were by Archer and D. Doerr.

The club is in a flourishing condition, and will welcome any visitors to Los Angeles who will take the trouble to call at its quarters.



## BOOK-REVIEWS

*Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices. Send for our list of approved books.*

**THE POCKET NATURE LIBRARY.** In four volumes—The Tree-Guide, The Bird-Guide, The Flower-Guide and The Butterfly-Guide. 700 color-plates, 963 text-pages. Attractively bound in flexible green leather. Price, \$4.50 for the set. Garden City, N. Y., U. S. A.: Doubleday Page & Co.

This handy set of books appeals to every nature-lover, all four being easily carried in the pocket. It comprises the Bird-Guide, land-birds east of the Rockies, a popular standard work, all color-plates, 229 pp., by Chester A. Reed; the Flower-Guide, wild flowers east of the Rockies, with 320 flowers in color, 332 pp., another standard work by Chester A. Reed; the Butterfly-Guide, a pocket-manual for the ready identification of the commoner species found in the United States and Canada, with 295 colored figures, representing 255 species and varieties, 237 pp., by W. J. Holland, LL.D., director of the Carnegie Museum, and the Tree-Guide, trees east of the Rockies, illustrated in color and in black, from photographs, 265 pp., by Julia Ellen Rogers.

**THE PORTRAIT-STUDIO.** By "Practicus of the B. J." Numerous illustrations. Price, 15 cents, paper. London: Henry Greenwood & Co., Ltd.

This comprehensive little treatise on the size, design, equipment and management of the studio will doubtless be welcomed by many aspirants to success in this line, and will be found more helpful than many a work selling at a higher price. Particular attention is given to choosing the size of a studio; ridge-roof and lean-to studios; single-slant and vertical-light studios; the top-light studio; choice of design; proportion of glass; the kind of glass; special glazing; warming the studio; floor- and wall-coverings; blinds and curtains; outside blinds and sunlight-obstructors; portable light-controllers in the studio; backgrounds, and lenses for portraiture.

### Counting Chickens

A READER of a certain picture-magazine was much impressed by a good-sized puff of the products of a western art-publisher, which wound up by referring the reader to the "advertisement in this issue."

Greatly interested, the reader turned to the advertising-pages and scanned them carefully, but failed to find the advertisement. He re-read the expression of praise and again examined the publicity-pages; but with no better success. He expressed his disappointment in a letter to the publisher, who, in his tardy reply, explained that the advertiser neglected to send the electro in time, which accounted for the omission of his advertisement. The advertising-order, which had been planned for only one issue, was subsequently canceled. The editorial puff was printed in the first form, and the advertisement was to follow in the last form. But despite such disappointments as this, the advertising-pages will probably always be the last to be printed.



## WITH THE TRADE



### "Made in Germany"

OUR esteemed cotemporary, *Photography and Focus*, is naturally much disturbed over the unsettled industrial conditions in Great Britain, due to the European war, particularly with regard to the importation and sale of German photographic products, which the British government has declared to be illegal. For purely patriotic motives, ostensibly, the proprietors of *Photography and Focus* announce "that they desire it to be known that, being in full accord with the recommendations agreed upon at the Paris Economic Conference, they will not allow advertisements of German firms and their manufactures to appear in their publication, either now or after the war."

Although this policy is one that concerns only *Photography and Focus*, we are inclined to regard the attitude of our cotemporary as somewhat disingenuous; for if it be illegal for any one to deal in German photographic goods — to "sell enemy goods in England" — of what earthly use is it for an English journal to advertise them? Moreover, the few German cameras, lenses, shutters and chemicals that might be sold in England at the present time — and are demanded because many prefer them to others — will not help much to pay for Zeppelins and submarines. And does not Germany herself forbid the export of her photographic products into England? How then can English merchants procure them to sell? These are cogent reasons, it seems to us, why advertisements of German photographic goods are excluded from the pages of our cotemporary. But are they? The very issue that contains the declared boycott against German photographic firms and their products — as well as each succeeding issue — devotes about four solid pages to advertisements, by six well-known London dealers, of photographic equipments of native and foreign makes. Of these a very large proportion is German, and among the popular styles of cameras the Goerz Tenax and Ica Bébé occur with alarming frequency.

By the way, it may have been noticed that cameras, lenses and chemicals of German manufacture have not been advertised in American photographic journals for some time past. Why? Simply because, thanks to the British blockade of German ports, American importers cannot obtain them. Certain English products, however, are advertised in the American photographic press, because England is quite willing that America shall have them.

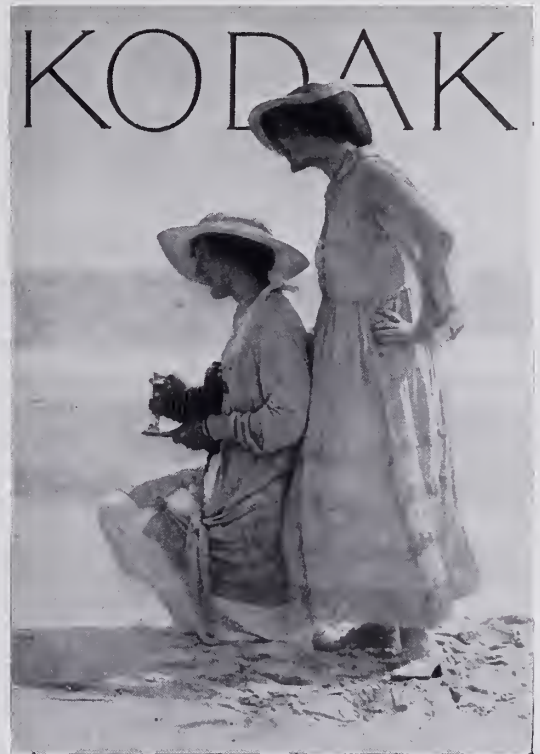
We very much fear that our cotemporary is making a virtue out of a necessity.

After all — and regardless of the present war — it is quite easy to stop the British sale of German goods, photographic or otherwise. One effective way would be for English manufacturers to produce similar goods of a quality and efficiency superior to those of German make.

But it is quite certain that the end of this great convulsion will see many important industrial and commercial changes, and it is not improbable that Great Britain will erect an economical barrier against German manufactured goods in the form of a prohibitive or protective tariff, although this would be contrary to the spirit of free trade, which has been the foundation of Britain's commercial prosperity.

### Kodak 1916

THE new catalog of this important line of cameras, films, papers and accessories is now ready, and may be obtained at any local Kodak store. Attractive as ever in general appearance, the cover bespeaks particular attention for action and human interest. The scene, typical of the seashore, was a prize-winner in the recent Kodak Advertising-Competition, and lends itself admirably to the scheme of wrapping about both front and back of the catalog.



THE CATALOG COVER

Just as all folding Kodaks are Autographic, so this year the Autographic feature has been extended to cover the entire line of folding Brownies. This ingenious method of dating and titling each negative at the time of making appears to have come to stay. We notice the omission this year of the No. 1 Brownie and the No. 3 Folding Brownie, but this is more than compensated by the addition of a new size among the Brownies and Junior Kodaks, designated 2C and measuring  $2\frac{7}{8} \times 4\frac{7}{8}$ , the same elongated proportion as the postcard shape long so popular. The instruments, too, are long, slim and narrow, and slip into the pocket easily.



## Amidol Now Made in America

It is a pleasure to announce that the sterling old developer, Diamidophenol, more commonly known as Amidol, is now manufactured in America by Brewster & Robbins, South Amboy, N. J. This rapid and powerful agent is well suited to both negative- and print-making. It was the favorite developer when bromide paper first became popular, and nothing has since been introduced to excel its rich black tones. The price is low for these abnormal times, and in use its economy is rendered still greater by reason of the fact that no alkaline salt, such as sodium carbonate, is required. This latter advantage minimizes the tendency of the working-solution to cause frilling at high temperature, so that Amidol has come to be regarded as the foremost developer for use in summer and the tropics.

## Removal of C. G. Willoughby

CHARLES G. WILLOUGHBY, he of untiring energy and square-deal fame—now located at 810 Broadway, New York—has leased for a period of ten years the premises at 110-114 West Thirty-second Street, opposite Gimbel's department-store, where he expects to be settled about November 1. This location probably is the busiest business-section in Greater New York, if not in the Western Hemisphere. Within two blocks' distance from Willoughby's new quarters is the Pennsylvania Railroad Station; within a stone's throw are the Manhattan Elevated, the Hudson Tube and most of New York's surface-lines, Seventh Avenue and Broadway stations of the new subway which is to be completed in 1917, and the new ten-million-dollar Pennsylvania Hotel, now under construction. Willoughby's new stock-rooms are nearly three times as large as the present quarters on Broadway.

The new firm will be incorporated under the name of Willoughby, Inc., and be so arranged that the employees will participate in the earnings. After carrying, personally, great responsibilities for about eighteen years, Mr. Willoughby wishes now to share the same with those who have assisted him to acquire whatever success has come to him. With a continuance of the alertness, precision and integrity that have ever characterized Mr. Willoughby's business-dealings, in buying and selling, there is every prospect that the new firm will enjoy that confidence and support that have been accorded Mr. Willoughby without stint.

## English Lenses

THE market in photographic goods of European make has been upset for about two years now; but owing to their foresight, and other reasons, George Murphy, Inc., of New York, has on hand a good supply of the standard Ross Lenses, including the famous Ross Xpres F/4.5—without question, the finest and quickest English camera-lens ever made. Send for catalog.

## The New Hess-Ives "Hiblock"

A SPECIAL camera is no longer necessary to the practice of Hess-Ives color-photography. Mr. Ives has perfected his "block pack," consisting of a front special blue-sensitive plate, and intermediate green-sensitive film and a rear special red-sensitive plate, all simply bound together at the edges. This pack handles as a unit, as a single, rather thick plate would, and is used in a very slightly modified plateholder of the "book" type, fitting any standard camera. The plates are coordinated for color and require no compensating filter. A single exposure only is required, as for an ordinary plate, the duration being about the same as for an Autochrome.

## Kathol, the Developer of the Hour

THOSE desiring more information regarding the new developer of American manufacture, Kathol, should write to the Kathol Manufacturing Co., 230th Street and Riverdale Avenue, New York City, for a copy of the little booklet telling all about it. As stated in the advertisement in PHOTO-ERA for August, Kathol is a real equivalent for metol, and unlike most of the substitutes on the market requires no special formula, but may be substituted for metol in your favorite developer. Its use by leading photographers, photo-finishers and motion-picture laboratories testifies to its merit.

## New England the Mecca of Tourists

THE tide of travel, all summer long, has been toward New England. The mountain- and seaside-resorts and the railroads have been, and are still, doing an unusually heavy business. Whereas many of the visitors remain throughout the entire season, others can remain but a few weeks, thus giving way to newcomers. Although there seems to be room for all, it is best for those still to come to make advance reservations. The illustrated booklet with map, issued by the Boston & Maine Railroad Co.—see advertisement—and sent free on application, imparts full and trustworthy information as to accommodations, rates, etc. Visitors, who come from nearly every section of the United States, are enthusiastic over New England's attractions. They are the beautiful scenery; historic places and lore; quick and safe transportation; prolific seaside- and mountain-resorts with their refreshing breezes; delightful facilities for motoring and all aquatic sports; abundant and varied camera-material, and the moderate cost of enjoying it all.

## Photography at Coming Electrical Exposition

THE photographic industry as a whole, and especially those who are seeking the last word in studio and darkroom-perfection, will find much of interest in the electrical exposition which will take place in the Grand Central Palace, New York City from October 11 to 21.

For several years past, the annual Electrical Exposition held in New York City, marked the progress of electricity in its relationship to the photographic industry. Through the comprehensive exhibit of The New York Edison Company this year, Mr. John E. Garabrant, director of The New York Edison Company's photographic studios, who is well known as New York's delegate to the eighth Congress of Photography, is preparing an exhibit of unusual merit. It will consist chiefly of a model electric studio and darkroom in which the public will be able to see the complete operation of developing and printing. Every process will be done electrically, thereby proving that daylight is absolutely unnecessary.

Everything pertaining to electricity in its relationship to photography will be gone into even deeper than at the recent Cleveland convention. The various phases of color-photography will also be shown. A cordial invitation is extended to all photographers to make The New York Edison Company's photographic exhibit at the 1916 Electrical Exposition their headquarters and to use the apparatus for any experimental work they may wish to undertake in electro-photography.

## The Auto Fixt Focus Camera

THIS de luxe  $2\frac{1}{4} \times 3\frac{1}{2}$  roll-film pocket-camera takes its name from the ingenious automatic focusing-device which forms its principal distinctive feature. Send to Herbert & Huesgen Co., 18 East 42d St., New York City, for the booklet descriptive of its superior features.

OCTOBER

1916

15 CENTS

# PHOTO-ERA

The American Journal of Photography

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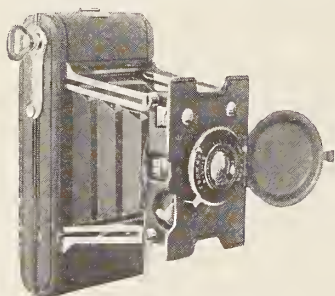


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ANSCO COMPANY BINGHAMTON, NEW YORK

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KATHERINE BINGHAM, Editor, The Round Robin Guild

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TENDER THOUGHTS  
E. E. DOTY  
P. A. OF A. SALON



# PHOTO-ERA

The American Journal of Photography

Copyright, 1916, by Wilfred A. French

Vol. XXXVII

OCTOBER, 1916

No. 4

## Photographic Portraiture

T. W. KILMER



IF one reads all the existing literature which is printed regarding this subject, he will probably arrive at either one of two conclusions: first, that a vast number of photographic artists really believe that they can make portraits and yet cannot do so at all; or, that a chosen few are really able to *make* photographic portraits of people, yet are totally unable to tell any one else exactly how they do it. What is a satisfactory definition of a portrait by photography? To my mind, a photographic portrait is an arrangement of monochromatic highlights, halftones and shadows permanently projected upon a plane surface, and more or less conforming to the accepted rules of art, but having, first of all, the predominant feature of perfect resemblance to the sitter. I wish to dwell upon this necessity of a perfect resemblance if one wishes to make a successful portrait. Personally, if I were going to have my portrait made by a photographer, I should insist, first of all, that it resemble me; it must look like me; it must take the place of me when I am away; it must be so much *like* me, that every one who knows me, especially my nearest friends, will remark on seeing it, "Well, that's Kilmer, all right." I would care not one whit if the shadow-side of the face was a little too deep in shadow, or whether the tip of the off-side ear presented itself or not; nor would it disturb the calmness of my inmost soul to notice that the nasal-shadow was thirty or forty-five degrees. Of course, these are all little niceties which many critics appreciate; but let me tell you that each year thousands of 8 x 10 negatives are sold as scrap-glass, which would have been successful portraits had it not been for the fact that the photographic artist, all too eager to incorporate the rules of art in his masterpiece, utterly failed to bring out the all-important feature — that of making the portrait *look like* the sitter. Many a surgeon's wound looks beautiful, the stitches hold, and the

operation *per se* is a great success, but the patient *dies*.

Do not make the mistake of trying to copy or imitate so-and-so's method of working. Get certain facts fixed in your brain (not your note-book) and, armed with these few fundamental truths, go to it and juggle them around, kaleidoscopically at first, but finally you will discover what you thought you knew, and will be credited by your *confrères* as at least being genuine and original. "Be genuine, even though in so doing you are a genuine damned fool." (I read that phrase in PHOTO-ERA many years ago, yet it is good advice to-day.)

What, then, are the necessities with which to make successful, representative and life-like portraits by the use of camera, lens, light-sensitive surfaces, chemicals and light? I may be taken to task for going into details; but I assure you that it is the lack of attention to details which makes an otherwise instructive paper fall far short. One often hears it said that it matters little what kind of camera, lens, etc., one uses in portraiture; for cannot a good workman work with any kind of tools? This is absolutely false when it comes to making photographic portraits, as the correct choice of camera and lens is all important. Do not make the error of choosing too small a camera. Successful portraits at times are made with a 5 x 7 or even a 4 x 5 camera and short-focus lens; but after all has been said and done, the best work is accomplished with a camera not smaller than 8 x 10. An 8 x 10 is convenient in size, especially for so-called home-portraiture (frequently erroneously named, being neither "home" nor "portraiture").

Accidents happen to all of us, and perhaps somebody has obtained a good, life-like portrait of a sitter by the use of a small camera and short-focus lens; nevertheless, a small camera is not consistent with good, non-distorted portraiture. Personally, I prefer an 11 x 14 view-camera having a forty-inch draw, a large front-





PORTRAIT OF DR. S.



T. W. KILMER

PORTRAIT OF DR. M.

board, and an extra back, adapted to the use of 8 x 10 holders. Nothing will destroy all your religion learned in early childhood more than fussing in a darkroom with 8 x 10 kits for a 11 x 14 holder; get an 8 x 10 back for your 11 x 14 camera and thereby avoid using "damitol" in developing.

Then comes the proposition as to the choice of a lens. The choice of a lens is just about as hard a question for another to decide for you as is the choice of a wife. Would an anastigmatic brunette or a soft-focus blonde suit your fancy better? How should any one else know better than yourself? Many of our foremost photographic portrait-makers use an anastigmat, whereas just as many other shining lights in portraiture by photography employ a lens that gives diffusion. Personally, I have no use whatever for a portrait which is hard, wiry, and which has the appearance of Washington's engraving on a twenty-dollar bill. What is the use of presenting a human being with a picture of himself, representing him in a manner in which his best friend and closest relative never saw him?

When you look at your father, mother, wife or child, you do not see every hair of their head, eyelash or wrinkle as a hard-drawn entity. Not at all. Nature understood her business when she gave us soft-focus organs of sight to behold all the beauty of this glorious world. When you see a member of your family, you behold him or her as a familiar form having certain well-known characteristics of shape, color, light and shade. I saw, but a few days ago, an exquisite set of sixteen 8 x 10 negatives of a woman, taken by one of our foremost portraitists, yet not one of these sixteen prints suited the sitter, because they all showed her *large mouth*. How could they help showing it? She *had* it, and had probably looked in her mirror thousands of times, yet never until that day had this personal characteristic been so plainly and anastigmatically pointed out to her. Through her soft-focus eyes, and the soft-focus eyes of her family, that large mouth had never been accentuated nor looked upon as a *mouth*, but simply more or less of a hazy attribute which was one of many points that went into the composition of her face. If you must use an anastigmat for portraiture, I beg of you to employ some method of diffusion in printing to soften down the otherwise inevitable hard lines of the picture. Should we decide then to use either a corrected or uncorrected lens in our work, of what focal length must it be to give us the best that is in it for portraiture? This is a point where many an able, artistic and proficient photographer fails utterly. From close observation of my own past work, and also the work of others, I will say un-

hesitatingly that most so-called portrait-work is replete with distortion. Take a collection of ten portraits picked up anywhere, at random, and study them critically as to distortion; you will find very few of them that stand the test.

An eighteen-inch lens for an 8 x 10 camera: no shorter length is consistent with good portrait-work. Look at many portraits of women, particularly bust-portraits, and see the near shoulder loom up nearly twice the size of the far shoulder. Gaze at the hands of many sitters, artistically posed, yet about twice again as large as they are in nature. *Regardez, s'il vous plaît*, many of the head-portraits of people, and notice well those bulbous noses which have almost the semblance of a sprouting potato; the ear in profile, appearing as a large Blue Point oyster-shell, while chins, cheeks and lower jaws seem to vie with one another for a point of vantage, and fairly howl out their distorted prominence to the critical observer. Yes, I fully realize that many photographers, even some of nation-wide repute, "get away" with it, selling these "distortos" at fabulous prices per dozen. Nevertheless, this fact does not make it right that these things should be. Use a lens of sufficient focal length and get far enough away from your sitter to produce correct perspective in portrait-work; you will be better satisfied and so will your sitters and your critics.

A lens-hood is very essential for good results; you may use the various types of hoods on the market or use simply a wire-frame with a piece of black cloth thrown over it.

The best type of shutter for portrait-work is one which is concealed and which makes as little noise as possible. The studio-shutter furnished with many lenses (especially the soft-focus variety) is an excellent one. The silent shutter, consisting of two thin leaves or doors, and placed back of the lens, is really the ideal one for portrait-work.

The use of a special make of plates or films is a matter of individual choice. To say which is the best plate or film is a very hard matter. All plates are good and all films are good. Glass plates have a way of breaking; they are heavy, and at certain times show a slight amount of halation even when backed. The disagreeable feature, to me, of backed plates is the messy business of removing the backing and the staining of the developer. The disagreeable feature, to me, of film-sheets is the fact that they have to be pinned up by one corner to dry, and also that each side, being gelatine-coated, is subject to abrasion. Personally, I use a cheap brand of plate, and the results obtained therewith are good enough not only to satisfy myself, but many others who see the prints made from these plate-negatives.



Whatever make of plate or film you do use, I beg of you to stick to that one alone and use the developer suggested by the makers of that plate or film. Panchromatic plates and a two-time filter (yellow) will produce excellent results, provided that your sitter will keep still for the added exposure necessitated by the use of the yellow screen. Personally, I have ruined many plates trying to accomplish the above result, as the sitter moved in over one-half of my exposures, unless taken out of doors in a good light. Professional models and a few people have the necessary control to enable one to use panchromatic plates and a two-time screen in studio-work.

Tray- or tank-developed? That is a question which we must decide for ourselves. Many like tray-work, and just as many are advocates of the tank. To me, the combination of the metal frame-holders for plates or films, and the hard-rubber tank is very appealing. By the use of these frames the plate is developed, fixed, washed and dried without touching it at all, your fingers are kept clean of developer, while at any moment you may examine the plate to your heart's content, in its safe place in the frame. Scratching becomes almost an impossibility. For the handling of 8 x 10 plates, this method seems a real necessity.

I shall say nothing about developers, as I believe in using the developer suggested by the manufacturer of the plate or film used.

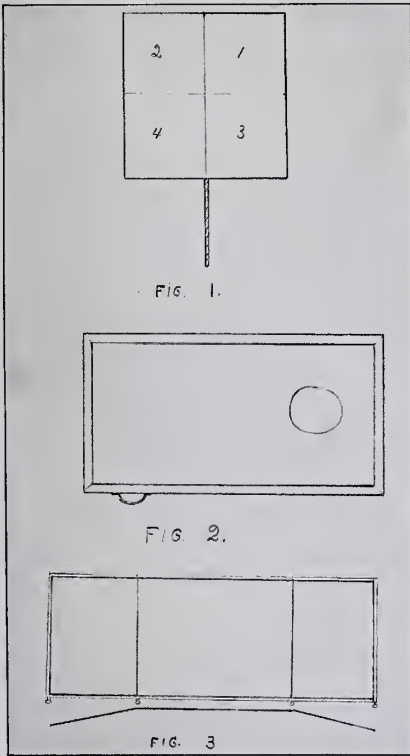
As to illumination in photographic portraiture, there is a great diversity of opinion. Every one has a perfect right to his own opinion, but of course the opinion of a person who has worked for a long time using this or that form of illuminant must be respected. I have used and seen used in portraiture about all types of illumination, from the filtered rays of the sun at midday to the soft, yellow rays of the incandescent gas-burner. The question of illumination resolves itself into the proposition of, first, the best sort of illumination for photographic portraiture is one which is absolutely constant and also of high actinic value. Second, what are your sources for obtaining the above? Many of the leading portraitists of our country are not depending upon daylight at all. Daylight is fickle from day to day, hour to hour and minute to minute; many a time your lighting will be perfect, you will start to expose, when bang goes a cloud across old Sol, and your scheme of lighting is defeated. I am done with daylight for an illuminant when I can obtain electric light, especially the mercury-vapor light. I am absolutely convinced that this is the light *par excellence* for photographic portraiture. First of all, it is an even, steady light. It is constant. It does not

radiate heat as much as do other forms of electrical illuminants. It is not hard on the eyes of either sitter or operator, the former being able to gaze directly at it without squinting. It is monochromatic. To me, this is one of its greatest advantages, as the sitter loses all color, becoming just a study in monochrome, with highlights, halftones and shadows all perfectly perceptible to the operator's eye.

In using daylight or artificial light, remember that a diffuser is necessary to good portraiture. Personally, I use a square wire-frame about four by four feet. This square is again subdivided by two wires into four equal, smaller squares. These smaller squares are covered with black lawn, the first square having one thickness, the second, two thicknesses, the third, three thicknesses and the fourth, four thicknesses of this black material (Fig. 1). This square diffuser may be held in the hand during the exposure, or may be fastened in the clutch of an ordinary old headrest-stand. Delightful lightings may be obtained by the judicious maneuvering of this screen. Another adjunct in the way of diffusers, which I employ, is the following: a frame of light wood or wire is constructed, oblong in shape, about three feet wide and five feet long. This frame is covered with black lawn, and a hole about six inches in circumference is cut out of one end of this oblong. A screen-door handle is fastened to one side of this frame (Fig. 2). By a circular motion of the frame during exposure, you are able to accentuate certain portions of the face in the same manner as one would vignette in printing. Headrests are mentioned merely to be condemned, as I never use one of any sort.

As to backgrounds: the plainer the background, the better. Personally, I use a three-fold screen seven feet high, the central panel of which is about five feet wide, the two end or side panels being about three feet wide (Fig. 3). One side of this screen is covered with dark green or brown grass-cloth or canvas, while the opposite side is covered with light gray, same material. Thus we have a single background giving us the choice of two tones — light and dark. The side panels of this screen may be turned so as to augment or cut down the source of light, and, when using daylight, act as reflectors. When using artificial light, you will get better results if you employ a smaller, supplementary lamp on the shaded side of the sitter instead of a reflector. The various lightings one may obtain with artificial light are many and varied.

Let us try to show, by the use of a few illustrations, the most common types of lightings. For this purpose I put into use a small plaster-cast, and under each illustration I have drawn a







COMMON TYPES OF LIGHTINGS

T. W. KILMER

diagram showing the position of sitter, camera, light, background and reflector. For photographic portraiture, the side-lighting, or what is known as ordinary "studio" lighting, is the one usually employed. This, however, may be modified by the use of diffusers and screens, so that with a little practice the best lighting for any individual face will suggest itself upon seeing the sitter. A rugged type of face will stand greater contrast in lighting than will a boyish or feminine cast of countenance. Do not have your source of light too high above the head of the sitter, as this tends to give the eyes a dark, sunken appearance. Remember to have your source of light far enough in front of the sitter to light up the face well, throwing the shadow of the nose about forty-five degrees down onto the shadow side of the cheek. Try to train your eyes to appreciate the various lightings upon the sitter when looking at him direct. Do not depend too much upon the image on the ground-glass, as it is often deceptive. Pinholes and blemishes in the negatives will need retouching; otherwise, retouching is an abomination. If you use a soft-focus lens, retouching can usually be dispensed with. The choice of printing-medium is best left to the individual taste of the artist. Personally, I use Artura paper, grade E. Rough, for all of my portrait-work.


The painter demands many sittings before he produces the finished product of his labors; and why should the photographic artist be expected to have a perfect stranger walk in on him, and produce a lifelike portrait by photography of that sitter, whom he has never seen before? It is

not reasonable. I will not try to produce a photographic portrait in one sitting. I must see the sitter several times, know him better, see him in his various moods, become familiar with many of his little idiosyncrasies, before I can try to make a portrait that looks like him. In this connection, I am reminded of a little incident which illustrates this point. One of our foremost photographic artists in portraiture was suddenly confronted one afternoon by a man of not only national but of international prominence, who walked into his studio and said that he had come to have his portrait made. The artist frankly told him that he was in no mood to make a portrait of him that day, but if he would call again next Wednesday he would see what could be done. The sitter argued that he had important dates the entire time for the next three weeks. The artist advised him to break a few engagements and treat his sitting for a photographic portrait the same as he would were it to be an oil-painting of himself. This all-important person saw the philosophy of the artist's words, called as requested the next Wednesday, when a photographic portrait was made which has startled the world as to likeness. Here is one great artist who knew his business, and here is one great ex-president of the United States who has a portrait of himself the like of which has never been equaled.

There is nothing which is more profitable than photographic portraiture done in a correct, up-to-date and business-like manner; and also there is nothing so entrancing and delightful as a hobby to the amateur as that art of making lasting and lifelike portraits of family and friends.

## Values

PAUL LEWIS ANDERSON

 HE question of values is one of the most abstruse which the artist has to encounter, and is of special importance to the photographer, whose work, lacking the element of color, depends for its effect largely on relative values. Line, of course, is important, as it must be to any worker in monochrome; but the technical methods employed by the photographer inherently are capable of rendering the values of nature more perfectly than any other medium, and the photographer has the power to modify them — even without manual intervention — to as great an extent as the worker in any other process. The objective side of the subject is learned easily, for, given a panchromatic plate as well as the ordinary and orthochromatic types, a visual

luminosity-filter and a set of contrast-filters, together with an actinometer and some knowledge of the effects of under- and overexposure and under- and overdevelopment, the photographer is equipped to render the relative values of the subject correctly, to compress or extend the scale, or to emphasize any particular color at will. This, however, is the least part of the matter, for the subjective effect of values is of the greatest importance, and some photographers with little technical knowledge have become noted for their treatment of values, simply by reason of their appreciation of the more abstract qualities, whereas the finest technician can never produce anything of artistic value if he goes no farther than this knowledge.

"PICTORIAL LANDSCAPE-PHOTOGRAPHY."





PORTRAIT-STUDY



T. W. KILMER

PORTRAIT OF MISS A.

# The Magic Masks

MILTON M. BITTER

(Concluded)



HAVING made our masks, let us take our cameras upstairs into the second- or third-story front room, where we can work in comfort. For our first test let us choose a day with bright sun and no clouds to cause changing light-conditions, for this test will be for our shutter-speeds, and in making it we will probably arrive at another conclusion quite as important, for we will probably get a better idea than we ever had before of what a *correctly exposed negative* looks like. We may find that the  $\frac{1}{100}$  second gives a better negative than the  $\frac{1}{25}$  that we have been accustomed to give with the same stop under the same light-conditions. Or it may be possible that, with a faster plate, we will find that  $\frac{1}{30}$  will give more satisfactory results than we have been getting with  $\frac{1}{25}$ , and we will regret that we did n't use F/22 instead of F/16 in photographing that row of houses last Saturday for the real-estate man.

Are we ready? Open the window. Let up the camera. Point down the street. Let the view to be photographed be about 100 feet distant. Take in a bit of a tree, a house with part in shadow, where detail is wanted (a porch, for instance), and about *one-third of image to be open sky*.

Insert mask AAAA in camera horizontally, with the opening in the lower, right-hand corner and the *number 1 in upper, right-hand corner*. Drop your lens-board as low as it will go and move it to the left (standing in front) so that the lens is *directly opposite* that part of the plate to be exposed. Focus, and take particular note of the position of the image on the ground-glass so that you can make all pictures uniform. Move one leg of the camera so that the principal lines of the image appear as nearly rectilinear on the ground-glass as possible, *regardless of whether the camera is level or not*, for in this test we wish to avoid the use of the swing bed or swing back. We wish to use only the *central rays* of the lens in its position *directly opposite* that portion of the negative being exposed.

Having your image in position, and the proper focus, stop down to the smallest diaphragm-opening with which you believe you can get *full exposure at  $\frac{1}{25}$  of a second*.

HAVING SET THE STOP, DON'T CHANGE IT ONE BIT THROUGHOUT THE ENTIRE SIX EXPOSURES. In fact, it will be well to wedge your stop indicator with a wad of paper, so that you will not move it accidentally in changing the position of

your lens. Now insert your plateholder *back of the mask*, making sure that the safety ridge is in its groove (rabbet) on the back of the camera. Set your shutter at  $\frac{1}{100}$ . Draw your slide. Expose. Insert slide. Take out plateholder and the mask AAAA, and insert mask BBBB (making sure that it does not cover the rabbet), with 2 in upper, right-hand corner. Set your shutter at TIME. Open the shutter, but *let the lens-opening (stop) remain as when making the previous exposure*. Step to the front of the camera and *slide* lens to the center, directly opposite the opening in the mask. You will then find that to get the image in the No. 2 space you will have to turn your camera *on the tripod-head* slightly to the right. Having located the image properly, close your lens, set shutter at  $\frac{1}{30}$  and proceed as before.

To expose for No. 3 opening, insert the third mask, CCCC, with figure 3 in upper, right-hand corner, slide the lens to the right (working from the front) until it is opposite the opening. Turn camera slightly to the right, on tripod-head, locate image, set shutter at  $\frac{1}{25}$  and proceed as before.

To expose for No. 4, slide the lens all the way across to the left into its original position, then raise it as high as it will go, or until it is directly opposite the opening for No. 4 exposure. Insert mask for No. 4 exposure, AAAA, with opening in upper, right-hand corner, and with figure 4 in upper, right-hand corner. Then move one of the tripod-legs and turn the camera, on the tripod-head, until the main lines of the image appear rectilinear in the upper space on the ground-glass, regardless of whether the camera is level or not.

Proceed as before, giving  $\frac{1}{100}$  second exposure for No. 4,  $\frac{1}{3}$  second for No. 5 and the quickest possible bulb for No. 6, sliding the lens to the right (working from the front) for each successive exposure.

Now develop your plate. The tank-method is best for this test. Do *not* use an ultra-rapid plate. If you use a tray, determine in advance the time and temperature that you will use, or develop for the  $\frac{1}{25}$  second exposure, which you will find on your plate in the *upper, left-hand corner* when the image is developing right-side up, sky at the top. The reason for developing for this image is, you will remember, that we figured that  $\frac{1}{25}$  would be the correct exposure for the subject.





AUTUMN IN THE BOSTON PUBLIC GARDEN

VINCENT DRISCOLL

It may be interesting to you to make note of the time of the first appearance of the highlights in each of the six images and thus convince yourself of the riskiness of the factorial system of development, except within the limits of approximately correct exposures; for you will probably find that had you used your factor on the quick bulb-exposure you would have an underdeveloped, flat image, whereas the same factor for your  $\frac{1}{100}$  second would have produced a harsh one. But by using the time and temperature method (a developer of a certain strength, used for a fixed time at a certain temperature, regardless of exposure) you would have had six negatives which, though varying much in density and printing-time, would have yielded almost identical prints with proper printing. At any rate, the negatives would be more susceptible to

after-treatment. If your quick bulb-exposure, for instance, had not been as quick as you intended it to be, and your plate was *considerably overexposed*, what kind of a negative do you think you would get with the factorial system so often advocated?

After *thorough* fixing and washing, when you are ready to judge results, *don't attempt to judge from the negative*. Make a proof on Solio or other printing-out paper. Print until you get a correctly printed image of the  $\frac{1}{25}$ -second exposure. Then examine the proof in subdued light and the *relative* depth of color of the six images will tell you whether your shutter-speeds are *comparatively* correct. Note this word *comparatively*, please; for, of course, this test will not assure you that your  $\frac{1}{25}$  is  $\frac{1}{25}$ , but it will give you a fair idea as to whether your  $\frac{1}{25}$  is *twice as much* as

your  $\frac{1}{8}$ , etc., and this information will be worth a whole lot to you. In examining your proof, note particularly the sky-tints and the color of the cast shadows.

It would be well to make a permanent *print* from your negative with full record of exposures, stop, time of day, light, meter-reading, developer, time of development, etc. Mount the six little pictures all in a row.

I would impress upon you the need to make *detailed records* of each step in all your experiments with the Magic Masks. *Don't trust to your memory.*

I think that the most valuable use that can be made of this first negative is in helping you to determine *which exposure was correct* for the printing-process you are accustomed to use. Of all photographic problems, that of exposure is the most important. For gaslight-papers a softer, thinner negative can be used than would be best for carbon-printing, for instance, which is a long-scale process, and for average subjects requires negatives of more vigor unless you are working for very soft, pictorial effects.

If there was a slight breeze (fortunately) when you made your exposures you can judge, from the tree in your image No. 4 ( $\frac{1}{10}$  second), whether you could "freeze it" (stop motion) at  $\frac{1}{10}$  second at 100 feet. This, too, will be valuable information for you, for if you are working for pictorial quality in your view-work and find, upon occasion, that  $\frac{1}{5}$  at F/11 is the indicated exposure, give  $\frac{1}{10}$  second (if far enough away to stop motion) and a *short development* and note the beautifully graded softness you get.

Before laying aside your first test-negative, I would suggest that you *print each image separately*, and you will probably find that from at least four of them you can get virtually identical prints, using, if necessary, different grades of the same brand of paper, assuming that you are using gaslight-paper.

A few suggestions as to testing various times of development may not be amiss.

For this test make six *uniform* exposures at the time you believe to be correct — say  $\frac{1}{5}$  second. Provide yourself with six wooden clothes-pins or film-clips, numbered from one to six. Also make a pencil-chart, of the size of your plate, having lines on it showing where you are to cut the plates. Take the glass-cutter and a heavy ruler into the darkroom and lay the plate, emulsion-side down, on a double piece of cheese-cloth placed on a level, hard surface. Then, laying the chart alongside of the negative as a guide, cut the negative into six parts. In cutting, give a *firm pressure* with the cutter, so that the edges will break clean. In breaking the negative,

do not touch the emulsion with your bare hands. Use soft, white gloves or a soft handkerchief. Lay the six little negatives in the tray, and put the numbered clothes-pins or clips on the edges of the tray — three on a side. Pour on the developer. Exactly at the expiration of a predetermined time, say four minutes, take out one negative, rinse it well, lay it in the hypo-tray and take pin No. 1 and fasten on the side of tray adjoining the plate. At the end of four and a half minutes transfer No. 2 negative and its pin. After five minutes transfer No. 3, etc.

After fixing, transfer negatives *and pins* to a washing-tray and wash with ten or twelve changes of water, allowing three or four minutes between each washing. Before setting up the negatives to dry, remove all excess water by swabbing fronts and backs with a wad of moistened absorbent cotton or pressing lightly with a soft lintless cloth. Maintain the numbered order of the negatives when drying, and, before making prints, number each one with India ink, so that they can't get mixed.

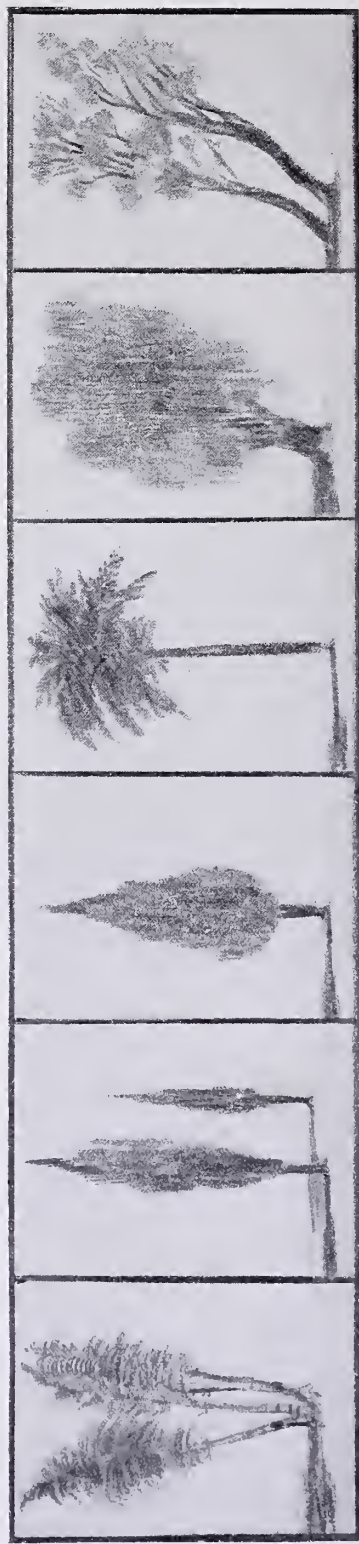
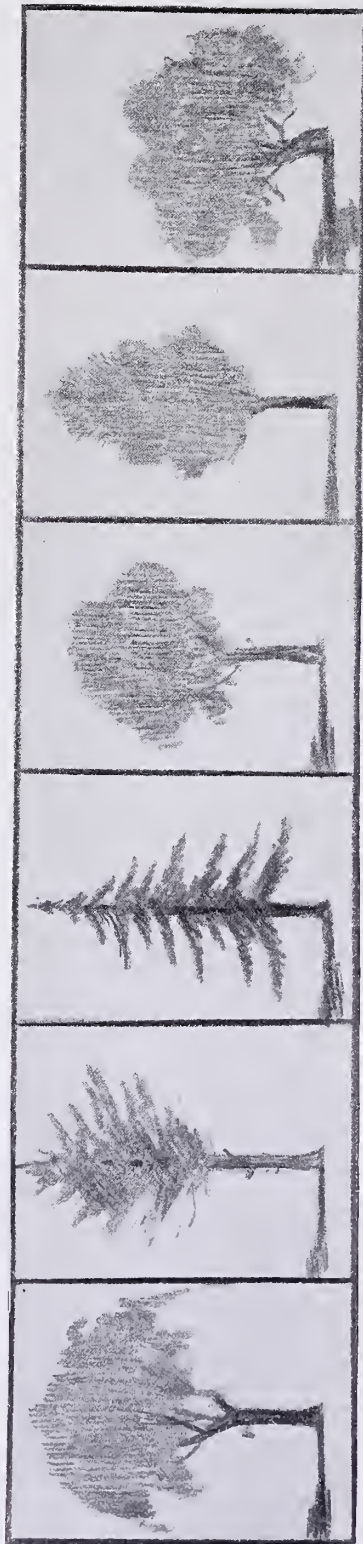
To remove each plate from the developer, *promptly* at the predetermined time have one finger under a corner of the plate ready to lift it, for it is n't always easy to lift these little fellows out of the solution without considerable fumbling.

Your own ingenuity will provide means for making the various other tests mentioned in the first part of this article.

A final word of caution. Don't think that by cutting holes in plateholder-slides you can use *them* for masks in connection with a regular slide. If your plateholder has a flexible valve, you can get your slide-mask *into* the holder, but can't get it *out* without difficulty, for the valve will rise up into the opening and catch. If your holder is of the old type, when you put in and pull out the slide with a hole in it, light is likely to stream in on the end exposures on the plate as the opening passes over the valve.

Advanced readers of PHOTO-ERA may think that these articles have been burdened unnecessarily with details; but I ask your indulgence for the sake of those beginners that hope to become "advanced" workers some day and realize, as I have so often done, the lack of *definite* instructions on labels, in instruction-sheets that accompany apparatus or materials, and in textbooks and articles on photographic subjects. At the risk of boring some, but in keeping with the editor's wish, I have endeavored to make the articles PRACTICALLY HELPFUL, knowing that for him that makes use of the Magic Masks they will lead to *exact knowledge* by the shortest route, in the quickest time and at a great saving of energy and materials.





# Trees in Composition

## Their Beauty and Decoration in Photography

H. L. GLEASON



ANY photographers, especially beginners, photograph trees because they happen to be in the scope of the lens. There are those who do not appreciate the value of trees, and some who do not think them altogether beautiful; and, sure enough, they are not, when photographed by some. But trees are the true decoration of a picture.

The great painters, who did not use the camera, have demonstrated this by the prominence given the trees in their pictures. They might have "recorded" many more subjects, but the camera was not available. Let us look to Constable and Corot. How much they depended, when painting a landscape, upon the trees for decoration. Constable, for instance, often used trees to frame a beautiful vista. And in his composition very often he placed one group of trees near the observer and the other group in the distance, thereby breaking up a symmetrical effect which might have been very annoying.

No man ever loved trees more than Jean Baptiste Corot. If a few others have painted like him, it is because they possessed souls which made it possible for them to interpret nature somewhat as he did. He knew the value of trees in a picture. Not only did he find trees invaluable as an outer portion of the picture and as a means to decorate the vista, but he thought so much of their picturesqueness that he often made them the principal thing in the subject. In some of his pictures the sky and mountains, the cows and the river, are all accessory, and the beautiful, richly colored, feathery trees are brought out very prominently. It will do us no harm to read the words of Sidney Allnut. He says, "Corot is seen at the height of his powers in the 'Souvenir d'Italie.' The thousand subtle nuances of exquisite color in the luminous sky, the refined firm drawing of *the trees*, and the happy confidence revealed by every brush-mark upon the canvas, make it one of the most delightful and, we may say, most lovable of its creator's works."

These men did not follow any fixed rule of composition, but rather followed their natural instincts. You may say, "Ah! but that is different. Corot and Constable and the others were painters, and that which was in them spoke through the hand and told them the right and wrong in composition—but we are not all artists."

Very good, that is just the point. Let the writer direct your thought and attention to the sketches on the preceding page. How lacy and feathery, how delicate and caressing, or how bold and full of strength and character a tree may be.

In these sketches are portrayed some of the trees seen in America. Study the beauty and grace of each branch, and then the tree as a whole. They are all trees, but how different. First the elm, with its wide-spreading branches; then the white pine, lifting its arms up towards the sky; the spruce points its arms towards the earth; the walnut comes nearest to being round in shape, whereas the maple is the more symmetrical, well-balanced tree. The apple-tree is the more artistic because of its irregular shape. Notice that the modest birch never grows alone, but rather in schools or family-clusters. The poplar trees are the soldiers, sentinels and pickets, keeping watch for the main army of trees in the distance. The cedars have been called the picture-trees. Maxfield Parrish, to say nothing of many others, delights to use them because of their great possibilities in "breaking up" the set of horizontal lines in nature. The palm is in a realm of its own. How much different the outline is from any of the others. The weeping willow, or, as a little man has called it, "the raining tree," is the sober tree. The white pine and the maple seem to smile and gaily raise their arms as compared with the weeping willows, yet few trees are more decorative. And, finally, the willow itself, which peeks at you around the bend of the road or the river, was grown purposely for artistic photography.

In another sketch depicting the respective environment of these same trees, I have tried to show a few good examples of tree-composition. In each of these instances the tree has been made the principal object, and all else is accessory to it. The big elm commands attention, whereas the farmhouse is the balancing-portion of the view. The white pine is the principal air, as in the musical composition, whereas the trees in the distance are the other parts of the strain. The same applies to the spruce, to the walnut and the others as well.

In the photographs reproduced herewith the big tree in the Boston Public Garden scene stretches out its mighty arms to keep back those who would do harm to the statue of General Washington or to the multitudes of tender



flowers beyond. The big pine tree of the forest defies the cold winter-blast and protects the younger and more delicate trees behind it. The spreading elm in the other Public Garden photograph has a real personality and is the grandmother about whose skirts the fickle human beings cluster and prattle of their troubles or their happiness. The willows are waving their arms to you, asking you gently and politely if you will enter the vista to which they actually point. The two lower photographs bring out the fact that trees are almost as graceful and interesting without the adornment of leaves as with them, and the same principles of composition apply.

Let us talk for a while about composition. Of course, there are no ironclad rules which can be applied definitely; but general rules are used invariably by those who have made it a study, namely, good balance — the placing of the principal and subordinate objects — the high and low horizon, the main lines of the picture, etc. In reference to the principal and subordinate objects, we may refer to composition in music. Suppose the composer played two themes on the piano at once, each one independently of the other, there would be absolute confusion and discord; none the less in your picture this is true. As you seek a good photograph, and two trees present themselves, place the camera in such a position that one of the trees becomes the dominant note and the other subordinate. We have often seen two trees or two groups of objects in one photograph, each clamoring for attention, whereas had the picture been divided there could have been two separate photographs, more pleasing and each one complete.

A word about reflections. It is merely a technical achievement to photograph a mountain

rising up above a lake, the reflection of which is as clear and definite as the mountain itself. The mountain in itself is sufficient, allowing the reflection to be subservient unless, perchance, it is a reflection-picture — then the scheme is reversed. Attention may well be directed to the Norwegian painter, Thaulow, who would not hesitate to allow the top of his canvas to sever the quaint old house midway, so that the interest is centered in the swirling river below.

Birge Harrison sums up composition very well, indeed, as follows: "Don't crowd your composition." Let your tree or your mountain have breathing-space. Keep them away from the edge of the frame. They will gain in dignity and apparent bigness by diminishing rather than increasing their proportions.

"Don't put in a single unnecessary feature." Everything which does not contribute to the grace, or the beauty, or the force or the sentiment of your picture detracts from it. But unquestionably the best rule of all is to keep the eyes always wide open and observant of the things about you, for the most beautiful compositions in the world are always daring and unexpected arrangements of nature.

Try not only to get a good "snap" or "time" of a place or scene, but make it a picture. Many good photographs are made by accident, but many photographs are really bad accidents. Of course, when you desire to secure a "snap" of kitty just before she springs for the field-mouse, you cannot always stop for studied composition; but when you photograph landscapes, or the home, or the roadway, or, best of all, the trees, try to do them justice, for they are the landscape-decorations and the natural beauty of the earth itself.

## Mistakes in Tank-Development and Their Avoidance



**T**ANK-DEVELOPMENT of photographic dryplates is based on the use of a greatly diluted developer which works with extreme slowness and develops, at one time, a number of plates or films that have been exposed for different lengths of time and under greatly varying conditions of light, equalizing the same better than can be done by hand-development and using more concentrated developers. Tank-development has often been called a universal developing-method, and it has many devotees, especially among amateurs.

Occasionally one finds on negatives developed in a tank light encircling lines on the contours of large dark objects, which are caused by the salts of bromine that form during development being attracted by the parts adjoining their place of formation and there becoming fixed, and affecting unfavorably development in those places. According to Lüppo-Cramer, it is a mere question of diffusion. He says: "As to the cause of this peculiar appearance (of light bands), it is plain that it cannot be attributed to the action of diffusion during development. In those places where the strongest blacking occurs, a relatively



THE RESPECTIVE ENVIRONMENT OF AMERICAN TREES  
H. L. GLEASON





large amount of soluble bromide will form, and this diffuses itself in the underlying gelatine coating and prevents the formation of chemical fog there. Since the developing-solution is greatly diluted, the comparatively small amount of bromide salt has a strongly anti-fog influence. In fact, this appearance becomes weaker with increased concentration of the solution, but it almost always shows itself in negatives with very strong contrasts when developed in the tank if the plates are not kept moving up and down." These defective appearances have long been known, and have been explained in several other ways. H. Schmidt discusses the appearance of fog and streaks, and gives, as their causes, the following explanation: First, the plates stand too close to the side of the tank, with the sensitive coating facing towards it. Second, the developer has not been sufficiently mixed. Third, water or ice has been added to it. Fourth, the plates stand so close to one another in the tank that the exhausted developer cannot always replace itself by fresh.

Owing to numerous complaints regarding the formation of streaks on negatives developed in tanks, H. Seemann was induced to make further exact investigations in continuation of earlier work on the subject. These investigations resulted rather unfavorably for tank-development, especially with negatives that later might acquire a scientific value. He had frequently observed that in vertical development, i.e., the plates placed upright in the tank, the upper third of the plates is always noticeably more strongly developed than the lower part, and it has been found that even under quite normal conditions and with close observance of instructions it was impossible to obtain negatives developed evenly and free of streakings. The larger the uniformly lighted surfaces are, and the quieter the developer is allowed to stand in the tank, the greater will be the difference between the upper and lower portions of the plate and the more intense the streakings and markings. Seemann considered that large, uniformly exposed plates could best be developed by the Walter horizontal method, in which the plates are laid exactly horizontal and are allowed to remain without rocking the developer. But even in this method narrow light seams are apt to appear around sharply defined dark fields.

It would thus appear that the faults of tank-development investigated by Seemann occur only when large surfaces of uniformly strong exposure are developed, and he mentions cases where these appearances gave rise to seriously erroneous conclusions, as in photographs of stars and in radiographs, the latter leading to a wrong diag-

nosis. In the present article, however, we will consider Seemann's discussion more from the standpoint of the practical photographer.

He gives the following explanation of the formation of streaks in tank-development: On entering the gelatine coating, the developer reduces the exposed silver bromide; the resulting products of reduction, according to the density of the reduced bromide, form a more or less dense layer, which becomes diffused back into the developer and, being heavier than the fresh developer, it sinks towards the bottom in a somewhat thick stream along the face of the negative. Along the course of these streams the approach of fresh developer is prevented in a purely mechanical way and the progress of development is hindered. Moreover, the bromide salts that have formed act as a chemical restrainer. The speed of these streams is so great that the diffusion of the reducing salts in the film in contact with them almost entirely ceases. According to Seemann, the streams creep extremely close along the face of the gelatine without appreciably affecting the remainder of the developer. The streaks and fogging observed by him were so sharply defined that he could detect a constant flow of the complex fluid. He came to the conclusion, therefore, that Lüppo-Cramer's statement that the unimportant streak formations observed by the latter arose from diffusion within the gelatine coating was quite improbable, for such diffusion would have to overcome an enormous resistance in comparison with their free flow in the developer.

What, then, do these observations teach the practical photographer? In portrait-pictures, strongly exposed surfaces in slightly exposed surroundings are doubtless rare, and a streaky formation is not to be expected there. In landscapes with strong contrasts, however, such as snow-fields with cloudless sky, or both these factors — if there are snow-surfaces against a uniformly gray-developed sky — or other homogeneous fields, streak-formations will probably be observed. A condition requisite for this formation is that the plate rest quietly against the tank during the whole developing-process. If the plate is moved several times, the streaking is perceptibly weaker, and if it is changed alternately to opposite edges, the trouble is as good as eliminated. Streak-formation can be virtually avoided entirely if the plates, when developing in the tank, are changed at regular intervals to all four edges; or, still better, the tank is placed on all six sides. In doing that, however, the chief advantage of tank-development is lost.

As may be judged from their cause, the defective appearances described are generally



PICTORIAL USES OF TREES  
H. L. GLEASON







THE AQUAPLANE-GIRL

PAUL M. ELDER

weaker the smaller the plates. The same writer further observes that in practical photography tank-development should be employed with just as many precautions as are required in ordinary tray-development with plates of uncertain exposure, if the negatives are to meet the highest requirements.

For the practical photographer the satisfaction remains, that the disadvantages ascribed to tank-development occur only to a noticeable and injurious degree in cases of conditions of extreme exposure. With scientific subjects, however, that call for exact values, even tank-development is not devoid of objection. Uniformly exposed large plate-surfaces — after moderate rocking — have shown a maximum differ-

ence in blacking of fifty percent, and with the strongest stirring of the developer this difference could not be reduced to less than eighteen percent.

These are things the knowledge of which is really educative. When we figure to ourselves what a powerful influence development, as such, can have on the distribution of the blacking in a negative, we must wonder all the more what the normal negative may produce in spite of this, and what a color-screen offers us. . . . or is it only our eyes that fortunately help us deceptively over such inequalities.— *Das Atelier*.

✂

“A picture is an illusion.”— *Birge Harrison*.



FRENCHMAN'S BAY FROM MT. DESERT NATIONAL PARK

GEORGE R. KING

## A Measure for Depth of Focus

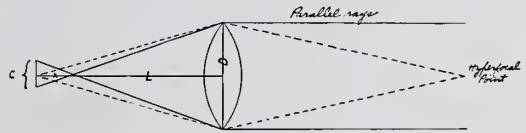
GEORGE S. PFEIFFER



AS is well known, there is a point to place a lens at which both near and far objects are rendered with most nearly uniform sharpness, which is called the hyperfocal point. At this point the objects located at the distance indicated on the focusing-scale of the camera focus sharply, but distant points are focused as circles. At the hyperfocal point these circles should be so small that when a print is seen at the usual reading-distance they will look like points. Experience has shown that these circles should not exceed  $\frac{1}{100}$  inch in diameter.

To find the place to set the lens so that these circles shall not exceed  $\frac{1}{100}$  inch in diameter, two methods are used. The first method is to figure out by means of a formula how near to the camera the objects will be that will focus sharply when the circles created by distant points do not exceed  $\frac{1}{100}$  inch, and then to set the lens at the corresponding distance on the focusing-scale. This distance will vary with the diaphragm used, and with the focal length of the lens, making it necessary to figure these distances separately for each lens. The other method, a new one as far as I know, is to figure the distance between the location of the lens when focusing distant points sharply, and when focusing them so that circles of diffusion do not exceed the maximum diameter. As will be seen by proof below, this distance varies only with the F-number of the

diaphragm used, and so is applicable to all focal lengths. Where  $\frac{1}{100}$  inch is used as the maximum circle of diffusion, these distances are the same in hundredths of an inch as the F-number of the diaphragm used.



Illustrating the Influence of the Diaphragm

C = circle of confusion  
 L = focal length  
 D = diameter of diaphragm  
 X = movement of lens necessary to make blur equal to C  
 F = F-number of diaphragm

- (1)  $\frac{X}{C} = \frac{L}{D}$  similar triangles
- (2)  $D = \frac{L}{F}$  because  $F = \frac{L}{D}$
- (3)  $\frac{X}{C} = \frac{L}{F}$  substituting in above equation No. 1

$\frac{X}{C} = \frac{LF}{L}$  clearing of fractions

$X = C F$

Where  $C = \frac{1}{100}$  of inch we have  $X = \frac{F}{100}$ , where  
 F = 6 we have X = .06 inch



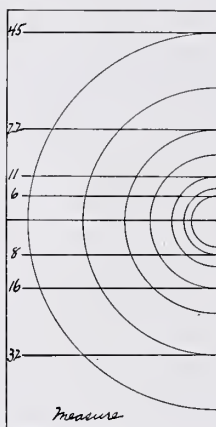


FIG. I. — Measure drawn to enlarged scale. In actual size each circle has a radius in hundredths of an inch equal to the F-number of the circle.

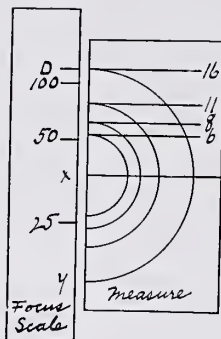


FIG. II. — Finding the hyperfocal point. X indicates hyperfocal point for F/16. Y indicates distance of nearest objects that will be in focus when lens is set at X and F/16.

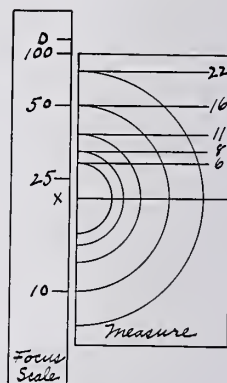


FIG. III. — Bringing extremes into focus. To get both 10 feet and 50 feet in focus, set the lens at X and use F/16.

Knowing these distances, we can then make a measure which will show how far the lens should be moved forward from the place where distant points focus sharply in order to get the hyperfocal point for that lens (see Fig. II). There will be objects located between the hyperfocal distance and the camera which will focus as circles not exceeding the maximum diameter of diffusion. By extending our measure the opposite way from the hyperfocal point, we can locate the nearest limit of these objects. By connecting the respective points for each opening by semi-

circles, we can see how much latitude each diaphragm allows (see Fig. I for completed measure).

We can also extend the use of this measure to solve another problem. Suppose we want objects at 10 feet and 50 feet to be in focus, and want to know what diaphragm to use and where to set the lens. Determine which semicircle embraces the 10- and 50-foot marks on the focusing-scale of the camera. This will give the diaphragm-opening necessary. The mark corresponding to the hyperfocal point will be the place to set the lens (see Fig. III).

## Further Comments of an Amateur

HAROLD N. LOEB



NUMBER of persons to whom price is a matter of secondary consideration have been heard to say that they would be pleased to purchase a miniature camera equipped with a motion-picture lens working at F/3.5 or F/2.5, were such an instrument obtainable. An outfit of this kind, fitted with a good shutter, would be more independent of light-conditions than the best camera other than a motion-picture machine that can be procured at the present time, and ought not to cost more than \$50. The depth of focus of these small lenses, even at their biggest apertures, is well known to patrons of motion-picture theaters.

Incidentally, a European lens-manufacturer is now advertising an anastigmat in the larger sizes

working at F/4, a gain over the F/4.5 speed which seems to have been considered in America the fastest practicable for these many years.

Another fact that owners of lenses that do better than F/6 may have noted is the dearth of compact cameras to which they may be fitted. At the present writing I can think of only two cameras which are comparatively compact in the smaller sizes which will accommodate big lenses — the Graphic and one of the Ensign models. The Speed Kodak was a good camera of this type, but to the best of my knowledge it has been withdrawn from the market. Any one who has "toted" a Graflex or a view-camera on a tour will understand the reason for these remarks.

Another product that is sadly needed and cannot be had is a speed-film working as quickly as



AUTUMN-SWEETS  
GERHARD SISTERS





the fastest plates. There are many occasions on which photographers are willing to sacrifice color-sensitiveness, fineness of grain, non-halation qualities — everything, in fact, for speed. And at such times, the difference between F/111 and F/156 (Wynne), the relative speeds of the fastest films and the fastest plates, is felt to be a serious handicap by users of film-cameras.

An amateur friend of mine has discovered what to me is a new and simple method of producing double or tinted borders on prints. I give it for what it is worth. Instead of double-printing with edge and middle masks, he uses a single cut-out mask about one-quarter inch in width of architect's tracing-paper. On this is superimposed another mask of opaque paper, one-eighth inch in width, glued to the first so that their outer edges coincide. The tracing-paper, being semi-transparent, produces a gray inner border, and the outer, opaque mask, a white border, both during the same printing.

While I am speaking of masks, I wish to say a few words regarding the shape of photographs. I am not one of those amateurs who admire pictures the edges of which are a fanciful series of curves, as supplied by the packets of "assorted masks" on the market. At the same time, I will risk censure by stating that an equilateral triangle frequently produces more pleasing pictures

than the immemorial rectangular shape. Especially is this true of portraiture, where a "spread" of background on both sides of the head and shoulders of the subject seems odious to me, because superfluous. Of course, such a portrait should be mounted on a triangular mount. In landscape-photography, other geometrical figures, such as the diamond, may sometimes, though rarely, be used to advantage.

At the risk of even more severe criticism, I will state that a photographic comment which I read recently was particularly irksome to me. It was to the effect that the advanced worker can tell the makers of our best examples of photography by their peculiar personal touches, their style, individuality or whatnot. They can "spot" a Garo or a Dührkoop photograph without the maker's signature. Do you believe this? If you do, you belittle the skill of thousands of professional portraitists in every city of the country. We have had too much of this wordy piffle that "sounds good in print."

In conclusion, permit me to urge you not to let your painter-friends derogate photography because it reproduces nature in monotone, for therein lies the glory of photography. What etching, or charcoal- or pencil-drawing ever approached its subtle half-tones? And who likes a "colored photograph"?



NEW YORK FROM THE EAST RIVER

JOSEPH MAERZ



# EDITORIAL



## Faulty Lantern-Projection

CONSCIENTIOUS attention to the success of a task by a paid employee is said to be alarmingly on the decrease. This lack of interest among attendants in mercantile life, in domestic affairs and, indeed, almost every walk of life, is generally recognized, but is not so easy to remedy. In many instances it appears that it is not so much a matter of carelessness as it is of insufficient training — indeed, it is merely a case of inefficiency. In photographic activities one meets it frequently, notably in the department of lantern-projection, which has become an indispensable adjunct to our educational system, and is *per se* an inexhaustible source of entertainment. Here, indeed, is an occupation that calls for skilled and trustworthy operators; yet they are hard to find. Not only are the shortcomings of the average lanternist a source of annoyance to the lecturer, but to the audience as well. The acts of commission and omission on the part of this functionary are well-known, and the requirements exacted from him have tended so to raise the standard of efficiency among this class of assistants that it is positively delightful to observe how smoothly the operation of an optical lantern can be accomplished. The source of illumination is brilliant, steady and virtually silent; the machine remains firm in its position; the lantern-slides are projected without a jar or other mishap; the definition on the screen is irreproachable; and last, but not least, the screen itself is clean and flat, all of which puts the lecturer and the audience in an easy frame of mind.

But sometimes the lecturer himself is responsible for certain annoyances. For him publicly to request his assistant to replace a lantern-slide removed prematurely, may be embarrassing to that functionary, though not his fault. Sometimes a picture will be projected upside down or even reversed, because the label has been placed on the wrong corner of the lantern-slide.

The speaker should see that the lantern or stereopticon is of a type the operation of which shall not be a source of annoyance to the audience. The housing should be lightproof, so that no rays from the light-source or brilliant reflections shall reach the eyes of the spectators. If the machine is placed entirely in the rear of the hall, these defects will not be troublesome. The

lantern-slides should be of standard size and thickness. The screen, unless a roller-curtain of stiff and perfectly flat material, should be free of creases, wrinkles and holes, stains and spots. The silent electric signal should be used if possible, as the pounding of the pointer is annoying, and the ever-recurring request, "The next, please!" unpleasantly monotonous. Many speakers have the habit of addressing their remarks to the screen, and thereby prevent them from being heard. Some thoughtlessly turn their backs to the audience in describing a screen-picture, which is even worse. The lecturer should be so familiar with his subject and the accompanying views, that he can face his hearers during the entire discourse. Even when using the pointer, he should manage to direct his voice towards the audience.

At meetings of camera-clubs and scientific societies, some member generally serves the optical lantern. He likes to perform this pleasant duty and also save to the club the expense of a professional operator. But often a well-meaning though inexperienced person will attempt to operate the stereopticon, and, as a result, ludicrous and embarrassing incidents occur. For instance, if the lantern has an old-fashioned slide-carrier, the entire operation of pushing in a slide, and displacing it by its successor in the same clumsy way, is visible on the screen, and the effect of illusion is completely lost. When a slide that is too thick is inserted, it will stop in its passage, leaving a section of the screen uncovered. The unlucky diapositive is then pushed and pulled, the lantern wobbling painfully meanwhile, until, at last, it yields to the frantic efforts of the operator, and is either forced into place or quickly removed. During the course of the struggle, the forms of gigantic digits are seen on the screen, and the slide is covered with fingerprints, which obviously do not improve its appearance. The audience might be spared the sight of these bungling efforts of the operator, would he but cap his lens; but this simple expedient probably does not occur to him, or, maybe, there is no cap. Sometimes, when an arc-light is used as the illuminant, and the carbons are not placed at the proper distance from the condenser, the screen is not lighted evenly, and the necessary adjustment, unless effected quickly and skilfully, will annoy many in the audience.





THE WOUNDED HAWK  
FIRST PRIZE — NATURE-STUDY SUBJECTS  
WESLEY HEEBNER





# ADVANCED COMPETITION



Closing the last day of every month  
Address all prints to PHOTO-ERA, Advanced Competition  
383 Boylston Street, Boston, U. S. A.

## Prizes

*First Prize:* Value \$10.00.

*Second Prize:* Value \$5.00.

*Third Prize:* Value \$2.50.

*Honorable Mention:* Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.

## Rules

1. This competition is free and open to any camerist desiring to enter.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. *Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.* Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P. or black-and-white paper having the same gradations and detail.

3. *Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name, address, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what competition it is intended.*

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with *double thicknesses of stiff corrugated board, not the flexible kind, or with thin wood-veneer.* Large packages may be sent by express very cheaply and with indemnity against loss.

7. The prints winning prizes or Honorable Mention in the twelve successive competitions of every year constitute a circulating collection which will be sent for public exhibition to camera-clubs, art-clubs and educational institutions throughout the country. The only charge is prepayment of expressage to the next destination on the route-list. This collection is every year of rare beauty and exceptional educational value.

## Quarterly Miscellaneous Competitions

IN order to extend the opportunities for participation by a larger number of our readers, and to broaden the scope of the entries, these will be a feature of 1917.

## Awards — Nature-Study Subjects

Closed July 31, 1916

*First Prize:* Wesley Heebner.

*Second Prize:* William S. Davis.

*Third Prize:* Lawrence Baker.

*Honorable Mention:* Frank R. Eddy, J. H. Field, Gustave Glueckert, Chas. O. Handley, Judson Hayward, E. D. Leppert, Esther Heacock, Louis R. Murray, Harry G. Phister, B. C. Rounds, Myra D. Scales, W. Stelcik, Mrs. H. C. Travis, Harry D. Williar.

Special commendation is due the following workers for meritorious prints: Joseph Abel, F. E. Bronson, R. A. Buchannan, A. B. Klugh, E. D. Leppert, C. M. Littlefield, F. F. Weaver.

## Subjects for Competition

"Animals in Landscape." Closes September 30.

"Marines." Closes October 31.

"Camp-Scenes." Closes November 30.

"Flashlights." Closes December 31.

"The Spirit of Christmas." Closes January 31.

"Miscellaneous." Closes February 28.

"The Spirit of Winter." Closes March 31.

"Home-Portraits." Closes April 30.

"Miscellaneous." Closes May 31.

"The Spirit of Spring." Closes June 30.

"Landscapes with Figures." Closes July 31.

"Miscellaneous." Closes August 31.

"The Spirit of Summer." Closes September 30.

"Vacation-Pictures." Closes October 31.



Photo-Era Prize-Cup

IN deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

## A Test for Metol

IN a recent issue of *The Photographic Journal of America* E. J. Wall gives the following test for Metol. Make a 1 to 20 solution in water, add a little sulphuric acid, cool by adding ice and then add with constant stirring enough strong solution of sodium nitrate to make the mixture smell of nitrous acid. If the substance be Metol a mass of fine needle crystals will separate.



## Camp-Scenes

### Advanced Competition, Closes Nov. 30, 1916

THE popularity of the summer-camp seems to be increasing steadily; and that this is so is a cheering indication of a more sane and sensible attitude toward life on the part of our people. There was comparatively little recreation for mind or body in the still-not-extinct vacation spent in donning many changes of fine raiment and adorning hotel piazzas where hundreds of other lay-figures were on exhibition — the chief exercise of such vacationists being fancy-work or sitting on the beach in bathing-suits too fine and expensive to stand wetting.

Very different is the camp-vacation. There, plain, wholesome food and plain, sensible clothes combine with outdoor-exercise — swimming, horseback-riding, tramping — to build up a sound mind in a sound body and give a new zest to life. In an organized camp, training is also given in handieraft of various kinds, so that pleasant and profitable occupation adds its stimulus to mind and hand.

Of course the camera is a vital part of life in camp, and no other souvenirs of such a vacation could ever mean as much to the campers as the snapshots of actual incidents and camp-experiences. The average snapshot, however, is hardly likely to be such stuff as prize-winners are made of, and one must think out one's picture, here as elsewhere, and be sure that simplicity, good composition and lighting do their part to ensure success. Even the homely everyday-duties, when they are done after the primitive manner suited to real camp-life, take on elements of the picturesque and make good subjects for camera-studies. Cooking, gipsy-fashion, over an open camp-fire is not only good sport but good camera-material. The open fire has an attraction for all sorts and conditions of men, and especially attractive is the fire in the outdoor surroundings, with its suggestions of our pioneer forefathers, and of the primitive races of all history.

The pot suspended by a tripod is particularly picturesque, and all campfire-scenes gain in interest if a twilight-effect is obtained. This can be done only by the use of the flashlight, but by that means many very interesting studies can be made. In order to carry out the idea of the firelight, the flash must be used in the fire. A good way is to use the powdered magnesium, which is not explosive, and may be wrapped in tissue-paper and tossed into the blaze. There might be a merry group around the fire roasting corn, cooking bacon on pointed sticks or simply "swapping yarns" in friendly fashion. Some of the sitters should be persuaded to sacrifice their pride to the cause of art and allow a back-view to be taken, as the dark silhouette against the light beyond is most effective, and the idea of the circle about the fire can be carried out only in this way. It is astonishing how characteristic a back-view of this sort can be, and how unmistakable is the likeness. If the camp be that of a group of Boy-Scouts or Campfire-Girls, the chances of picturesque effect are increased by the costumes.

A group of Boy-Scouts busy about their tents, or even at the meal-hour, would be good material, whereas a group of Campfire-Girls in their Indian costumes, seated about their Council Fire, is a picture long to be remembered. In organized camps for young people many arts and crafts are taught. Picturesque groupings of the boys or girls at work should be easy to make. Basketry, with its suggestions of Indian handiwork, might lend itself to our purpose, as would also work in pottery or weaving. When horseback-riding is taught, a great opportunity is offered for work with the camera:

the tethered horses being fed, or a group being saddled and brought around for a trip; a mounted group of campers off for the day with their equipment, or the same coming home in the evening-light. All make good picture-material. Many times the camp itself is so "beautiful for situation" that it alone makes a real picture. Either nestled into a hollow of the hills, or reflected in the waters of a quiet lake, its white tents form an interesting focus for the eye and give life to the picture. Water of some sort is a necessary accompaniment of the camp life, and many of the camp activities gain in picturesqueness if performed in its proximity. The camp-cook washing and preparing his vegetables beside the brook or lake, morning ablutions performed from the side of boat or canoe, the morning dip in the cool waters, dish washing in the lake — any of these could be worked up into picture-material.

The files of PHOTO-ERA show a great dearth of pictures of this sort; I suspect because of lack of thought and care in the making of pictures submitted. They must be more than lucky snapshots. They must show a well-thought-out composition and arrangement. It takes a little experience and a few spoiled plates to make one realize that not everything that is interesting to observe will make a good picture. The one who swears by "things as they are" is very apt to have a collection of plates showing a promiscuous assortment of "things" in the background or, worse yet, in the foreground, that ruins the artistic value of his work. Here as everywhere else it is a question, not of how much can I include, but of how much can I leave out. A good plan is to begin, not with a confusion of things, and then eliminate, but with a single element, and then add only those things that are necessary to tell the story.

In the issue of PHOTO-ERA for April of this year (page 181), you will find a camp-scene which has its good points and its bad ones. It commends itself for its simplicity, in the first place. There is no one item that could be spared; but in arrangement much is lacking. Perhaps the tent was taken as the nucleus, being needed to stamp it as a camp-scene. Then, since the fire is the center of camp-life, that is the next item added, then, to add life and interest, the four campers complete the very brief list of component parts. Of course, the apparent firelight comes from a flash set off behind the log, and the placing of the flash between the camera and the sitters was a rather daring thing to attempt. It was justified, however, by the results, although the picture would have gained by the cast shadows had a position been chosen a little more at one side. The grouping of the four men in a straight line directly across the print might well be criticized. Had one of the two center figures been raised a little, as by sitting on a stool, and the outside figure on the opposite side have been lying on one side, resting on one elbow, with feet toward the fire, the lines would have carried out the pyramidal composition and made the whole thing more pictorial and satisfactory without detracting from the naturalness in the least.

If the camp be that of hunters in the Maine woods or other wild country, it may be possible to get a good study including some of the game. Nothing could be less pictorial than the usual snapshot of the hunter with a row of deer strung up as tokens of his marksmanship; but an old guide stretching a skin or cleaning fish should make a good study.

Whether a large camp or a small one, whether it be in tents or cabins, or by lake, or stream, or mountain height — the primitive, simple "back to nature" kind of things are the ones that hold most of interest to the average human, and that furnish the most desirable camera-subjects.

KATHERINE BINGHAM.



THE NECTAR-GATHERER

WILLIAM S. DAVIS

### The Value of the Swing-Front

MODERN lenses, when used at their full apertures, will give such good definition that for open landscape-work no stopping down is required. Apertures of  $F/6$  enable one to use a rapid orthochromatic plate with, say, a 6- or 8-time light-filter for such subjects — and they are many — as will gain by such a method. But sometimes the foreground approaches the camera in such a way that the nearer portion is out of focus when suitable definition has been obtained on the rest of the subject. In such cases a swing-front or a swing-lens is a great advantage. Some hand-stand cameras possess this desirable addition, and I have recently had a hand-camera made to which a swing-front was fitted for this focusing-advantage, and nothing else. With screen-focusing — and, of course, a reflex camera gives screen-focusing in its own way — it is not very material whether the front of the lens is made to swing, but where adjustments have to be made blindfold the swing-lens is the better. For most adjustments however, the vertical displacement of the image by swing-

ing the front is very slight, provided the front is pivoted through the axis of the lens, and where the lens is deeply set in the front-panel it is almost negligible. The degree of adjustment could be scaled according to the distance of that part of the foreground required in sharp focus, it being assumed that the lens was set at the hyperfocal distance for the  $F/6$  stop.

C. H., in *The Amateur Photographer*.

### Securing Parallelism in Copying

WE recently dealt with the best method of getting plate and subject parallel to one another in the process of copying, and pointed out that exact methods of securing the desired result were somewhat scarce. Mr. J. H. Gear in a recent discussion at the Royal Photographic Society advised the following method: Draw a right angle cross upon the focusing-screen in the center and make a white cardboard ring fitting the lens, with a pair of black threads at right angles crossing the opening. Lay a mirror flat on the copy and adjust things so that the reflection of the black threads





THE FROG

LAWRENCE BAKER

is focused on the screen, the image being superimposed on the cross drawn thereon. It is claimed that under these conditions the plate and copy will be as nearly parallel as possible, but to render that so, certain other conditions must be fulfilled as well. Assuming that the crossed threads are centrally opposite the lens, that the mark on the focusing-screen is similarly centered and that the cross is vertical, then fulfilling the prescribed conditions simply ensures that the lens-axis is at right angles or normal to the copy. If a rigid copying-camera is used, then also the plate will be at right angles to the lens-axis and parallel to the copy; but if we are using an ordinary field-type of camera with adjustable back such parallelism is not necessarily ensured. If the cross is a vertical one it may still be possible to superimpose the cross image on the marked cross even when the back is swung considerably from the one correct position. If, however, we use a diagonal cross this will not be the case at all, and superposition then implies parallelism as well. With this precaution the method is a very good one, but it is advisable to use as large a piece of white card as convenient and the largest possible cross, otherwise the image will be very small, and it will not be easy to secure exact superposition. Care must be exercised to get both crosses properly centered.—*The British Journal of Photography.*

### Weighing Small Quantities

THE photographer's scales, or "balance," is not always a very sensitive or accurate one, so that when weighing small quantities—a few grains of bromide, for instance—he may easily go considerably astray. Fortunately there are one or two simple little dodges which go a long way on the road tending towards accuracy. These are quite well known to students of chemistry, but do not seem to have been printed in photographic text-books. The reader may argue that a grain or two more or less cannot matter. Sometimes

this is so; sometimes such an error may be disastrous. It is largely a question of proportion. If we are weighing an ounce of sodium carbonate, for example, probably 50 or even 100 grains more or less will not make or mar the results of a developer. But if we add two grains of bromide instead of one grain per ounce of developer the result is likely to be by no means negligible. Furthermore, with potassium bromide at 1s. 3d. per ounce as against 2d. about two years ago, it behooves one to avoid waste. In general terms, it may be said that if one's weighing (for most photographic purposes) does not exceed 10 percent, or say 9 or 11 grains in place of 10 grains, we are not likely to perceive any difference in final effect. Let us call the two (right and left) pans of the balance R and L. Usually we put the substance S in one pan—say R—and balance it by weights W, in the other pan, L, and take it for granted that S equals W. It may or may not be so. *Borda's Method:* Put the object S in R pan as before, then counterbalance this by putting sand, etc., in L pan. Now remove S from the R pan, and counterbalance the sand, etc., in L by weights in R. This gives the true weight-equivalent of S. *Gauss' Method:* Put the object S in the R pan, and balance with weights in the usual way, and suppose this to be  $n$  grains. Now put S in the L pan, and balance with weights in R. If again  $n$  grains are required then the object S weighs  $n$  grains. But if the balance is defective (as most are to some extent) let us suppose the second weighing to require  $m$  grains. To get the true weight multiply  $n$  by  $m$ , and then take the square root of this product. By way of example, suppose the first weighing shows 13 grains and the second weighing 22 grains. Multiplying these together we get 286. Taking the square root we get 17, very nearly, or an error of 4 grains in the first case. So that when using this balance in the usual way in future, one must remember to add mentally 4 grains to the weight in the left pan; i.e., what appears to be 14 grains is really 17 (very nearly).—F. C., in *The Amateur Photographer.*



# THE CRUCIBLE

A MONTHLY DIGEST OF PHOTOGRAPHIC FACTS

With Reviews of Foreign Magazines, Progress and Investigation

Edited by PHIL M. RILEY



## “Cold” Light for Motion-Pictures

ACCORDING to recent newspaper-reports, the substitution of paper rolls for celluloid films in motion-picture machines is made possible by the new “cold” light discovered by the French engineer, Dussaud, which is described to the Academy of Science by Professor Branley, with whom Dussaud studied the new light. It is obtained by automatic separation of heat-rays from luminous rays, which occur together in all sources of light hitherto known to science.

The quest of an absolutely pure light devoid of all heat, long has been one of the great problems of modern physics. The electric light is the nearest approach to this ideal, but far from it, as it gives off a certain amount of heat.

M. Dussaud has been working on this problem for many years. The light obtained by his method is so intense that it is possible to throw images from newspaper-illustrations, picture postcards and photographic prints on a screen even in a lighted room as clearly and sharply as if they were glass lantern-slides.

## Removing Stains from Prints

It is not at all easy completely to remove a yellowish stain from a print. Ordinarily it is cheaper to throw stained prints away rather than to devote valuable time and chemicals upon the doubtful chance of remedying them. As often as not the remedy will prove to be their ruin.

However, some improvement usually may be obtained by putting the prints through the chromium intensification process. First, bleach the prints in the following:

Potassium bichromate .....	100 grains
Hydrochloric acid .....	3 drams
Water .....	10 ounces

In about two minutes the prints will become a pale buff, when they may be washed for fifteen minutes in running water and then redeveloped with an ordinary amidol solution.

## “Stereoscopic Relief” with Single Prints

Is it a fact not generally known that a kind of stereoscopic relief can be seen in single prints, if you look at them with one eye only? Or is the thing so well known that nobody ever mentions it?

Anyway, it is a fact, and I think it is rather interesting to speculate on the cause of the phenomenon. First, as to how and when you can see it. Of course, the relief is never so vivid as the relief seen in a stereoscope (or by squinting) with two prints taken with a stereoscopic camera; but it is very striking under favorable circumstances. I cannot perceive it at all in painted pictures nor in enlargements. I can see it only slightly in 4 x 5 prints; not very well with the tiny, vest-pocket size prints; but most vividly in prints made with a 2½ x 3½ camera. I think that the question of size depends on the focal length of one's eyes. I am short-sighted, and a 2½ x 3½ print just fills my field of distinct vision when I look at it in focus and without my spectacles. I expect that any one with longer sight could perceive the relief equally well in a larger print. To

see it, you must shut one eye, and look at the print steadily with the other eye for a moment or two, and the relief will start into view. It is much more vivid with a glossy print than in one with a “velvet” or matte surface.

Now for the cause of the phenomenon. I have frequently seen it stated that the scene before us can never be seen in true relief unless we look at it with both eyes. This statement is quite wrong. The sense of relief does not depend entirely on our seeing a little bit more of one side with one eye, and a little bit more of the other with the other eye, and then combining the two images. On the contrary, the single eye is educated to perceive space in three dimensions by differences of light and shade and of angle — by linear and aerial perspective, in fact. We do not see it in any painted picture, because the representation is not sufficiently exact to nature. But the lens gives the linear and (in a properly exposed plate) the aerial perspective exactly as the eye sees it. If we look at an ordinary photograph with both eyes, the combined images of the two eyes show us that it is a flat piece of paper. But if we shut one eye, the other eye is deceived by the exactness of the reproduction into making us think that we see just that measure of “relief” which we perceive when we look at an actual scene with one eye. If the print be glossy, the surface of the paper is quite imperceptible; but if it be dull or rough we can see the surface of the paper when we look at the print with one eye. And this greatly detracts from the appearance of stereoscopic relief.

I used to have a stereoscopic camera. I gave it up because it was cumbersome, and twice as much trouble as making single prints. It was also more expensive. Yet I have sometimes regretted not being able any longer to make a stereoscopic print. But now that I find that I can get the “relief” with my little single prints almost as vividly as if they were stereoscopic, I no longer wish for what I have not got. I have been an amateur photographer for nineteen years, yet it was not until a year ago that I noticed this “stereoscopic relief” with single prints. I therefore suggest this new pleasure to any other photographers who have been as unobservant as myself.

H. M. J. UNDERHILL, in *The Amateur Photographer*.

## Vest-Pocket Negatives for Enlargement

THIS is the day of the very small camera, the vest-pocket type, as it is often called; and for one amateur who uses anything of quarter-plate size or larger, there must be several who are content to get original negatives not very much larger than postage-stamps. Nor, for most amateur purposes, is anything larger required.

Enlarging-methods are easy and perfect, and from a good original, however tiny, we may make an imposing and effective picture for our walls. The little camera, therefore, has added very greatly to the facilities at the disposal of the photographer; the question we have to ask ourselves is whether its capabilities are employed to anything like the extent which they might be.

How many of the negatives obtained with such instruments can be made the basis of good large photographs? Not as many as well might be. The little





NATURE'S JEWELS

J. H. FIELD

original must be critically sharp, for one thing. As far as the lens is concerned, this is not a difficult problem.

The extremely short-focus lenses which are almost always fitted on instruments of the vest-pocket type have great depth, and even with comparatively large stops they do not require that accuracy of focusing which must be given to longer-focus lenses on larger cameras.

Then, too, the small size of the film enables it to be kept flat, so that imperfect definition from a curved sensitive surface is not likely to arise. Yet, in spite of these advantages, many of the very small negatives which come our way are far from being sharp enough to give good enlargements.

The cause of this poor definition undoubtedly is movement of the camera at the moment of exposure. It is absolutely necessary to avoid this if the degree of enlargement is to be at all great; in fact, if movement is perceptible in the original at all, one may be pretty sure that any enlargement from it will be unsatisfactory, except, perhaps, to a member of the so-called "fuzzy school." Therefore, any one who gets such a camera with the idea of doing work which is subse-

quently to be enlarged, must recognize from the outset that the habit of making exposures without shaking the instrument has got to be acquired. The fault is a very common one in all hand-camera work, but is due oftener to a failure to recognize that steps have to be taken to guard against it, than to any real difficulty in avoiding it.

The extreme lightness of these small cameras is apt to cause one to be careless about their steadiness. On the other hand, the shutter-movement is so slight that there is little chance of any jar arising from it. The chief cause of shake lies in the failure to liberate the shutter properly. The precise way in which a camera should be held and the button pressed must depend upon the particular pattern, and to some extent upon the conditions at the time; but the broad principles remain the same. These are that we should neglect no opportunity to get any outside support for the body, so as to render ourselves as steady as possible; and the other is that in releasing the shutter it should be done with one finger of the hand which holds the camera, that finger pulling against the hand itself, so



RESTING

W. STELCIK

that only the "button," relatively to the camera, and not the entire camera itself, tends to move. We need not labor this point, which has been dealt with very fully in these columns.

There is one other reason why little negatives are not always as suitable for enlarging as they might be, and that is that they are underexposed. A full exposure is very necessary if the negative is to undergo great enlargement, for more reasons than one. It is necessary, of course, to any negative that is to give a good print, since without full exposure the tone-values in the shadows must be wrong. But it is additionally necessary when the picture is to be enlarged, because it is a generally recognized fact that the granularity of the image is markedly greater in the case of an underexposed result than of one that is fully exposed; and, if the negative is otherwise crisp in its definition, that granularity is the factor which is the ultimate limit to the degree of enlargement. Therefore, a full exposure is of great importance.

There are minor causes for failure in these small negatives, but we have named the two which are the

most important. One must not overlook the fact that in apparatus of this extremely compact type all the clearances are reduced to a minimum, and a very slight distortion or strain may cause rubbing of the sensitive surface, and so give rise to marks on the negative. Guarding against these, and remembering that the apparatus, in spite of its trifling size, has got to be treated seriously, and that the selection of the viewpoint, the shading of the lens, and so on, are every whit as important as they are in the case of a 15 x 12, there is no reason why a good percentage of the total of the negatives obtained should not be capable of enlargement to six or eight diameters at the least, which is to say that an original little larger than a postage-stamp may provide an effective framed picture for the walls.—E. J. R., in *Photography and Focus*.

#### Just as Usual

"I SEE that Blithins is going to give an illustrated lecture on the Panama Canal."

"How is he going to illustrate it?"

"Why, with slides, of course."—*Gargoyle*.





# BEGINNERS' COMPETITION



Closing the last day of every month  
Address all prints to PHOTO-ERA, Round Robin Guild Competition  
383 Boylston Street, Boston, U. S. A.

## Prizes

*First Prize:* Value \$5.00.

*Second Prize:* Value \$2.50.

*Third Prize:* Value \$1.50.

*Honorable Mention:* Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

A certificate of award, printed on parchment paper, will be sent on request.

*Subject* for each contest is "*Miscellaneous*"; but only original prints are desired.

Prizes, chosen by the winner, will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

## Rules

1. This competition is open only to members of the Round Robin Guild. Membership, however, is free to all subscribers; also to regular purchasers of PHOTO-ERA on receipt of their name and address, for registration, and that of their dealer.

2. All Guild members are eligible in this competition provided they never have received a prize from PHOTO-ERA other than in the Beginners' Class. Any one who has received only Honorable Mention in the PHOTO-ERA Advanced Competition still remains eligible in the Round Robin Guild Beginners' Competition; but upon winning a prize in the Advanced Class, one cannot again participate in the Beginners' Class. Of course, beginners are at liberty to enter the Advanced Class whenever they so desire.

3. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. *Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.* Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P. or black-and-white paper having the same gradations and detail.

4. *Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data. Criticism on request.*

5. *Each print entered must bear the maker's name, address, Guild-number, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what contest it is intended.*

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit being given.

7. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with *double thicknesses of stiff corrugated board, not the flexible kind, or with thin wood-veneer.* Large packages may be sent by express very cheaply and with indemnity against loss.

## Awards — Beginners' Contest

Closed July 31, 1916

*First Prize:* W. T. Starr.

*Second Prize:* William J. Wilson.

*Third Prize:* A. S. Upton.

*Honorable Mention:* Margaret Anderson, Ikko Kura-chi, Irving S. Lovegrove, Wilma B. McDevitt, Louis R. Murray, Mrs. H. G. Reed, George P. Russell, Kenneth D. Smith.

Special commendation is due the following workers for meritorious prints: Susan W. Adams, Martha Curry, H. R. Hood, Takao Iwanami, Foster Lardner, Bert Leach, Dr. H. Pieter, Isaac N. Secor, M. C. Still, A. J. Voorhees, J. F. Webber, Elizabeth B. Wotkyns.

## Why Every Beginner Should Compete

THE trouble with most competitions is that they place the beginner at a disadvantage. If advanced workers be allowed to compete, beginners have little chance to win prizes, and so quickly lose interest after a few trials.

There are two monthly competitions in which prints may be entered with prizes commensurate with the value of the subjects likely to be entered. They are: The Round Robin Guild Competition and the PHOTO-ERA Competition. The former is the better one for a beginner to enter first, though he may, whenever it pleases him, participate in the latter. After having won a few prizes in the Beginners' Class it is time to enter prints in the PHOTO-ERA Competition for advanced workers.

As soon as one has been awarded a prize in the PHOTO-ERA Competition, he may consider himself an advanced worker, so far as PHOTO-ERA records are concerned, and after that time, naturally, he will not care to be announced as the winner of a prize in the Beginners' Class, but will prefer always to compete in the PHOTO-ERA Competition for advanced workers. In accordance with this natural impulse, it has been made a rule by the Publisher that prize-winners in the Advanced Class may not compete in the Beginners' Class.

To measure skill with other beginners tends to maintain interest in the competition every month. Competent judges select the prize-winning prints, and if one does not find his among them there is a good reason. Sending a print which failed to the Guild Editor for criticism will disclose what it was, and if the error be technical rather than artistic, a request to the Guild Editor for suggestions how to avoid the trouble will bring forth expert information. The Round Robin Guild Departments, including those of personal counsel and criticism, form an endless chain of advice and assistance if members will connect the links.

It is in arts themselves, as they exist, that we must find the elements to rejuvenate them. The characteristic of young schools is apparently an effort toward complex forms, expressing sensations and ideas of different aesthetic order. Most reformers in art are lacking in general ideas. They ask of isolated arts and not of associated arts a synthetic significance. Nowadays musicians exhaust themselves in literary efforts, poets in effects of color or music.—*Albéric Magnard.*



# THE ROUND ROBIN GUILD

An Association of Beginners in Photography

Conducted by KATHERINE BINGHAM



*This association, conducted under the auspices of PHOTO-ERA, and of which PHOTO-ERA is the official organ, is intended primarily for the benefit of beginners in photography. The aim of the association is to assist photographers by giving them information, advice and criticism in the Guild pages of PHOTO-ERA and by personal correspondence. Membership is free to subscribers and regular purchasers of the magazine sending name and address to PHOTO-ERA, The Round Robin Guild, 383 Boylston Street, Boston, U. S. A.*

## Bromide Enlarging

IN looking over the summer's work, it is to be hoped that many amateurs will find among their negatives at least a few of prize-winning quality. If such is the case, these few should be given the best possible chance to make an impression on the judges.

Not infrequently, otherwise satisfactory plates are disqualified because of their small size, and the beginner is apt to think enlarging is beyond his powers or requires an expensive equipment. For one who has had any experience with the developing-papers, such as Velox or Azo, it should be very easy to take up Bromide-work, and a daylight-equipment for enlarging can be improvised at very little expense.

The first requirement is a room with one window that can be easily darkened. If this be upstairs where the window gets direct light from the sky, unobstructed by trees or buildings, so much the better. Rig some sort of rough shutter that will fit the window snugly and having an opening the size of the negatives to be enlarged from. To find the correct height for this opening, place a table under the window, and on this a box a foot or more high, which will furnish a steady and firm support for the camera you use for your ordinary work. The opening should then be made of such a size and height that when the camera, with its back removed, is placed on the box it will cover the opening.

The only other requirement is now some sort of easel to which to attach the paper on which the enlargement is to be made. This may be simply a large box standing on the table, if the table is long enough to give you the size of enlargement you desire. The side to which the paper is to be attached should be covered with a smooth piece of white cardboard, so that the paper will lie flat, and on this the focusing may be done. The opening in the shutter should be provided with grooves deep enough to hold two thicknesses of glass, and in them should be placed one thickness of ground-glass and the negative — the negative on the inside with the film side turned inward. Should the negative be a film, a thickness of clear glass should be placed on the inside — the negative being between that and the ground-glass. If the window does not get the light direct from the sky, a reflector should be arranged outside, resting on the window-sill at the bottom and tipping outward at an angle of 45 degrees, so as to reflect the light evenly against the ground-glass of the opening.

The negative being in place, the camera, on its box-support, and with the back removed, is backed up against it. If the camera is of the folding variety, focusing is done by sliding the lens back and forth on the camera-bed; but if it is of the box-variety, the camera itself must be moved back and forth until the right distance is found for the size of enlargement desired. When this method must be pursued, it will be necessary to cover the space between the negative and

the camera by a focusing-cloth, or in some other manner exclude all light from the room save what comes through the lens and negative. (The shutter, of course, must be set on time and left open.)

After the camera has been put in place, and the white cardboard set up to receive the image, the worker should get an approximate focus and observe the size of the image. If it is too large, move the box bearing the focusing-screen nearer to the lens; if too small, increase the distance and again adjust the focus. It may be necessary to change the distance several times, at first, before the image can be adjusted to be in focus at the correct distance for the size required, but once this has been determined, the distance can be measured and will be constant for a given size.

Focusing should be done with a wide open lens, but a smaller opening used for the exposure. Having successfully adjusted the image, mark the corners with a pencil, then close the shutter, and with thumb-tacks attach the sensitive paper to the board so that the image will fall properly upon it. A red light should be arranged to allow proper adjustment when the lens is closed, for the bromide paper is very sensitive to white light.

The length of time to expose is the chief problem in this work, and much patience and paper will be saved by making a test-strip to gauge the time before exposing a large sheet. From half a minute up to three minutes with average negatives and paper should cover the extremes. Until one has become thoroughly familiar with the process and can judge exposure with fair assurance of accuracy, it is better to develop each print as made.

For developer, it is best to use that recommended for the grade of paper one is using, and if the directions furnished with the paper are followed carefully success should be assured.

## Correct Color-Rendering

Now that the woods and hills are putting on their gorgeous autumn-coloring, the photographer feels more than ever the restrictions of his art which confine him to pictures in monochrome. The Autochrome plates and other individual color-processes, while giving astonishingly good results, are relatively expensive, and not practical for ordinary use.

The ordinary photographic plate is sensitive to the blue and violet rays to a much greater extent than to the green and yellow, and is nearly insensitive to red; hence the red light for developing. One does not notice this defect particularly until one has cause to notice some special instance. Possibly it is some clump of yellow flowers, like golden rod, that one has tried to photograph. They shine out so brightly and distinctly from the green surroundings that one is amazed and mystified to find that in one's picture they are hardly to be distinguished from their foliage. A cloudy sky is another thing the ordinary plate is seldom equal to rendering correctly. The blue of the sky acts on the



plate almost as strongly as the white clouds, and they are indistinguishable in the print.

There are many brands of Isochromatic and Orthochromatic plates on the market that obviate this trouble to a greater or lesser extent; but to get the best color-rendering, especially with the autumnal colorings, it is necessary to use a color-screen or ray-filter. This is simply a piece of yellow glass or gelatine slipped over the front of the lens — or in some cases behind it — which lessens the amount of violet light received by the plate and increases the action of the green, yellow and red end of the spectrum. If this screen is too deep, it over-corrects and makes the blue sky so dark that one imagines a thunder-storm is impending. The filter should be of a bright lemon color and, for ordinary landscape-work, should lengthen the exposure about three times.

Film-users will find that the film has more or less orthochromatic quality and that with the color-screen it produces excellent results. It is even possible to use the screen when holding the camera in the hand. A three-times screen should give a full exposure, in sunlight, at  $\frac{1}{2}$  second, and, with care, that exposure can be given in the hand without movement. Full exposure is more than ever necessary for orthochromatic plates, as an underexposed plate of this type will be devoid of all atmospheric quality, and, indeed, will be less satisfactory than an ordinary plate properly exposed.

A screen with an ordinary plate is of no use whatever, and an ortho plate without a screen is hard to distinguish from an ordinary one; but a color-sensitive plate with a suitable color-screen is about the best equipment one could have for correct rendering of the autumn glories. Care must be taken in development not to expose the plates for too long a time to the action of the darkroom-light, as they are fogged more easily by red rays than are ordinary plates.

### Flattening Prints

EDITOR PHOTO-ERA:

Regarding your July PHOTO-ERA, page 13, subject, "Flattening Mounted Prints," I have tried many ways to mount prints, including the one suggested in that article, but find that the best is to trim them and paste the back with a good paste, with the print dry. Next transfer to the mount, then place between blotters and at once place in copying-press, such as is used to make copies on tissue-paper of letters. This brings the print in perfect contact with the mount, and, if left in the press for a short time, the mount will curl but very little, and even if the mount is thin, as used in albums, it will be quite flat. Yours truly,

H. W. GREEN.

### Needless Suffocation

ALMOST every summer some photographer writes us an account of the way in which he changed plates successfully at night by extinguishing the light in his bedroom and crawling under the bedclothes to do the work. No doubt the plates were not fogged; but then, if instead of getting under the clothes he had drawn up the blinds, opened the window if the night were a warm one and done the changing comfortably on a table in the room, he would also have got no fog, and the task would have been infinitely more pleasant. The scattered light of a summer's night in these latitudes has no effect upon a plate in the short time during which it need be exposed when filling or emptying slides. In the open air it would soon cause fog, perhaps; but in a room, even with the blinds up and the window open, there is no risk. When the moon is shining brightly into the room all we have to do is to keep the plates

out of direct moonlight. It is apt to cause some surprise at first, as after a few moments the white coating on the plates can be distinctly seen, and changing is made all the easier thereby; but no harm results. We have used the method dozens of times, with the most sensitive plates, orthochromatic and ordinary, without any ill-effects whatever on any occasion.

*Photography and Focus.*

### Gelatine, Moisture and Silver-Spots

EVERY one knows that when an unvarnished negative is printed on printing-out paper, and any moisture has access to the film, soluble salts of silver are transferred from the paper to the negative, and give rise to opaque spots, usually called "silver-spots," which are very hard to remove without injury to the image. But while this is recognized, the fact is often overlooked that rain or some other actual wetting is not at all necessary to produce them.

Gelatine is a substance which has a great attraction for moisture, so much so that some moisture is almost always present in it, do what we will. Fortunately, this minimum quantity is not enough to do harm. But in order to make sure that it is a minimum, or something approaching it, either the negative must be dried or it must at least have been kept in some place that was reasonably dry.

If the negative has been exposed to a damp atmosphere for a little while, such as is sure to be found in a room with an open, wet sink, the gelatine will absorb an appreciable quantity of moisture; in fact, if the negative is weighed on a good balance, and then made quite hot for a few minutes and weighed again, the loss of weight, due to water driven off, can be made visible. So that it is not enough to put the printing-frame where it will not get wet.

In damp weather, or where the negatives have been kept in a place not perfectly dry, it is a wise precaution to warm them before putting them in the printing-frame. If the pads of the back of the frame are also warmed, should there be any suspicion of damp, there is not much risk of the stains arising, unless the paper is left in the printing-frame all night — always a risky proceeding.— H. RIDGE, in *Photography and Focus.*

### A War-Time Saving

At the present time, when all chemicals are advanced in price (some out of all proportion with others), it is wise to see how far those which are less advanced may be substituted for the more costly. I had to prepare recently some neutral sulphite solution such as is used in the making of the A mixture in the pyro developer. For those who are not already acquainted with this I may say that pyro developer, made with neutral sulphite instead of acidified sulphite, requires less alkali in the B solution, and is therefore less likely to cause pyro stain and more lasting in use.

The formula usually given is as follows, the ingredients being dissolved in the order given:

Sodium sulphite (crystals) .....	2 ounces
Cold water .....	15 ounces
Potassium metabisulphite .....	$\frac{1}{4}$ ounce

Calculating out the available acidity of the metabisulphite, it appears that a quarter of an ounce may be replaced by thirty minims of concentrated sulphuric acid specific gravity 1.8 (this is the "pure sulphuric acid" of the chemist), together with a quarter of an ounce additional of sodium sulphite, and at the present prices this can be done at one-third the cost of the metabisulphite. One very important precaution is, however,



BREAKERS

W. T. STARR

necessary, and that is to reverse the order of solution. In the former case we add solid metabisulphite to the dissolved sulphite. In the alternative we must add solid sulphite to the dissolved acid. To mix the two in solution causes failure. The formula will, therefore, read:

Pure sulphuric acid (sp. gravity 1.8)	..30 minims
Cold water .....	.15 ounces
Sodium sulphite (crystals) .....	.2½ ounces

As the amateur will usually prefer to make up a smaller quantity, I suggest the following procedure: One fluid ounce of sulphuric acid is added to nine ounces of water (not *vice versa*, or dangerous ebullition may occur). This is kept in a stoppered bottle labeled "Sulphuric acid 1-10." A six-ounce medicine-bottle (rinsed free of any which remains of a previous lot, or sulphuric acid will be dissipated) is nearly filled with water and 120 minims of the 1 in 10 sulphuric acid added; the mixture is shaken and six and a half drams of the solid sulphite added to it. The bottle is filled up with water if necessary, corked, and put down on its side, turning it over a few times until the sulphite is dissolved. In tabular form the quantities are:

Diluted sulphuric acid (1-10) .....	120 minims
Water (cold) to make .....	6 ounces
Sodium sulphite (crystals) .....	6½ drams

This solution corresponds with that made with metabisulphite except that a little sulphate is formed as a by-product. This, however, makes no difference in development. In fact, the sulphite used by photographers always contains more or less sulphate as an impurity.

The only danger is in adding too much acid, but, provided the final solution does not redden blue litmus

paper, indicating excess of acid, there is no fear of error. Should excess of acid be used — and the same might arise in the use of metabisulphite, as samples of sulphite vary in alkalinity — it may be put right by the addition of a few crystals of sulphite. On the other hand, when the amount of acid used has not been quite sufficient, the only difference will be that the keeping-properties of the A solution of pyro will be lessened. Since, however, with crystal pyro it is so easy to weigh out a few grains, most amateurs will prefer to make their A solution at frequent intervals rather than keep a stock. The same applies to the solution of neutral sulphite.

Perhaps a more absolutely unjustifiable waste is seen in the preparation of the acid fixing-bath. The usual formula is:

Hypo .....	.4 ounces
Water .....	.1 pint
Potassium metabisulphite .....	.¼ ounce

Instead of this, we may dissolve in a pint bottle four ounces of hypo in ten ounces of water. In another bottle, two drams of the 1 in 10 solution of sulphuric acid are added to ten ounces of water, and then two drams or more of crystallized sodium sulphite. Slight excess of sulphite is no detriment. Excess of acid must be avoided. The mixture is shaken until the sulphite is dissolved, and then the acid sulphite solution so made is added to the hypo in small quantities — say two or three ounces at a time — shaking after each addition. On no account may the hypo be added to the acid. The saving in cost at present prices is elevenpence in the shilling on the cost of the metabisulphite, and there is no question as regards the equal efficiency of one or the other.

T. H. GREENALL, in *Photography and Focus*.





## ANSWERS TO QUERIES



Subscribers and regular readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Correspondence Department, PHOTO-ERA, 383 Boylston Street, Boston, U. S. A. If a personal reply is desired, a self-addressed, stamped envelope must be enclosed.

**P. O. W.—An acid fixing-bath** suitable for both negatives and prints, and which employs all salts instead of including liquid acetic acid, is as follows:

Water .....	64 ounces
Hypo .....	16 ounces
Sodium sulphite, anhydrous .....	1 ounce

When fully dissolved add the following hardener:

Powdered alum .....	$\frac{1}{2}$ ounce
Citric acid .....	$\frac{1}{2}$ ounce

As to your **light for enlarging**, it is difficult to advise you definitely without knowing the exact type of enlarger you are using. Of course there are to be had clusters of three and four Welsbach burners, both upright and inverted, if you must continue to use gas. If electricity is available, the new Nitrogen Mazda lamp with a concentrated filament is excellent for an enlarger having condensing-lenses. The electric arc is most commonly used by professional enlargers.

**S. O. N.—Failure to include wood-alcohol in the metol-hydroquinone developer** on page 89 of PHOTO-ERA for August, 1914, may cause difficulty in winter. The solution being considerably concentrated, it will partially crystallize if kept in a cold place. The addition of a proper amount of alcohol, and raising the temperature to 65 degrees, will re-dissolve the salts.

The slowness of working is also due, no doubt, to a low temperature. In winter there is always danger that trays and solutions will be too cold unless one works in a room that is always warm, or unless special precautions are taken. A paper-developer should be used, preferably at 70 degrees, and never cooler than 65. It is well to have a thermometer constantly in the tray.

**R. O. C.—Lettering on tombstones** should not be attempted on a cloudy day. To get the best results, this work should be done on days when the sun is shining brightly and obliquely across the surface of the stone which bears the lettering.

**E. A. O.—Lenses of whatever make are taken care of in the Photo-Era Exposure-Guide** by the table of stops. The chief advantage of anastigmat lenses over rapid rectilinears and meniscus types, aside from their linear- and color-corrections, etc., is that they may be used satisfactorily at large working-apertures, and it is

through this characteristic that they are more rapid. Thus in computing exposures the stop in use rather than the make of the lens is the guide.

**J. S.—The best way to obtain a realistic fire-light-scene** in monochrome is to stain or tone the print to a reddish hue. This may be done to the finished print with an aniline dye, such as new cocine (bright red), Ponceau 5R (red with violet tinge) or erythrosine (bluish red). Copper-toning will, perhaps, be more satisfactory for gaslight and bromide papers. Immerse the finished black print in:

Ammonium carbonate, saturated solution	1 ounce
Copper sulphate .....	10 grains
Potassium ferricyanide .....	25 grains

As toning proceeds, the print will pass through warm black, reddish sepia, brown, purple-brown, purple-crimson, reddish purple and through many shades of red to the so-called red chalk. Washing for ten minutes in water will stop toning at any desired stage.

**E. K. S.—The best tank-formula for glycin**, particularly for short exposures, is the following:

Hot water (200 degrees) .....	50 ounces
Sodium carbonate, anhydrous .....	.2 ounces
Glycin .....	$\frac{1}{2}$ ounce
Sodium sulphite, anhydrous .....	$\frac{1}{2}$ ounce

Dissolve in the order stated. For 10-minute development, use 5 ounces of stock-solution to 30 ounces water. For 25-minute development, use 2 ounces of stock-solution to 32 ounces water. Temperature, 65 degrees.



HARD SLEDDING

WILLIAM J. WILSON

SECOND PRIZE—BEGINNERS' CONTEST



Address all prints for criticism, enclosing return-postage at the rate of one cent for each two ounces or fraction thereof, to Correspondence Department, PHOTO-ERA, 383 Boylston Street, Boston, U. S. A. Prints must bear the maker's name and address, and be accompanied by a letter, sent separately, giving full particulars of date, light, plate or film, stop used, exposure, developer and printing-process.

A. J. V.—The trouble with "The Three Guardsmen" is that it needs a tinted or clouded sky; white paper like the present is decidedly detracting.

"Quiet Shore" would have been improved had the foreground tree been somewhat sharper in definition.

H. G. R.—Most of your genre-pictures of children suffer from overdevelopment — the white dresses being without detail or texture. "Southern Roses" is the most pleasing of your pictures this month.

K. D. S.—"The Serve" shows more action than "Raking Hay While the Sun Shines," the latter being merely suspended animation. In "The Serve" there is a white spot directly in front of the player's face which can easily be spotted out on the print, thereby greatly improving the effect.

"Summer Quietude" is a mere snapshot, and as a composition would have been better had the boat not been so centrally located in the picture-space.

H. R. H.—"The Frankfurter Man" is somewhat confused by two figures directly back of him which play no part in the story depicted, and also by the unnecessary figures to the right and left. Technically the result would have been better with shorter development.

A. S. W.—As space-compositions your last contributions are distinctly pleasing, but in definition and perspective they do not altogether satisfy critical judgment. Your "Tree in Springtime" is almost without detail anywhere. While "Our Back Yard" has fair definition on the distant buildings, they are insignificant as compared to the pattern of the silhouetted tree, which is considerably out of focus. "Snow Waters" is another subject which nowhere has sufficient definition, the distant trees in this instance being too important in the picture to be greatly slighted. In this respect "A Trapper's Trail" is much more satisfactory. Presumably the light in the center of "A Country Road" is the result of dust from an automobile seen in the distance along the road. We assume it is an automobile because considerable speed is required to create so much dust. There is, however, no other indication to show this is such a vehicle, and the composition would be much improved were it clearly defined, especially as the house at the extreme left is so distinct and so conspicuously light in tone.

W. J. W.—"Hard Sledding" is an interesting subject, well posed and pleasing in the unconsciousness of the model. The perspective and separation of planes in this subject are somewhat disappointing, due, no doubt, to the fact that definition is virtually uniform throughout the picture, and that a dark background always appears to be nearer than a light one. It is of the utmost importance to focus considerably more sharply upon a near plane when the background is dark, so as to emphasize perspective by separation of planes.

J. P.—"Old Glory on Memorial Day" seems to be a misnomer, for the flag itself and the ceremony occupy the background, while in the foreground several grave-



A WOODLAND PATH

A. S. UPTON

THIRD PRIZE — BEGINNERS' CONTEST

stones are prominently placed, one seeming to be as important as the other; there is no real center of interest. The particular print you have sent us is of uneven tone, apparently overtuned and taken from the developer too soon. "A Day's Pleasure in the Woods" is in every way more satisfactory, the figure is well placed and there is a pleasing absence of self-consciousness.

W. R. B.—In "Ready for Mischief" you have the material for an excellent picture, but unfortunately you appear to have used a soft-focus lens with too large an effective aperture. Such a use of this type of lens defeats rather than aids your pictorial aims. The unfortunate halation from the white shirtwaists, which is a characteristic of such lens-work, is here particularly unnatural and objectionable. Very careful focusing upon foreground-objects is necessary.

H. A. C.—Your snow-scene is attractive as subject-material and well-spaced. The prominent tree, perhaps, is too emphatic in its darkness, especially as the snow-shadows are so faint. Try a softer-working paper and print a shade or two darker, and see if the result will prove more pleasing.

E. E. D.—The element of human life is lacking in your photograph "In Cascade Park," and the swing suspended from the prominent foreground-tree offered a ready means to introduce it. So beautiful a setting deserves your attention again.

I. S. L.—"Summer-Shadows" has been underexposed and forced in development, the foreground-tree being too dark and without detail, and the spots of sunlight on the grass white and also without detail. The best effect of sunlight is always had when definition is always good in both sunlight and shadow.



# Photo-Era Exposure-Guide

Calculated to give Full Shadow-Detail, at Sea-Level, 42° N. Lat.

For altitudes up to 5000 feet no change need be made. From 5000 to 8000 feet take  $\frac{3}{4}$  of the time in the table. From 8000 to 12000 feet use  $\frac{1}{2}$  of the exposure in the table.

Exposure for average landscapes with light foreground, river-scenes, light-colored buildings, monuments, snow-scenes with trees in foreground. For use with Class 1 plates, stop F/8, or U. S. 4. For other plates, or stops, see the tables on the opposite page.

\*These figures must be increased up to five times if the light is inclined to be yellow or red.  
 †Latitude 60° N. multiply by 3; 55° × 2; 52° × 2; 30° ×  $\frac{3}{4}$ .  
 ‡Latitude 60° N. multiply by 2; 55° × 2; 52° ×  $1\frac{1}{2}$ ; 30° ×  $\frac{3}{4}$ .  
 §Latitude 60° N. multiply by  $1\frac{1}{4}$ ; 55° × 1; 52° × 1; 30° ×  $\frac{1}{2}$ .  
 ¶Latitude 60° N. multiply by  $1\frac{1}{4}$ ; 55° × 1; 52° × 1; 30° ×  $\frac{1}{2}$ .

## MONTH AND WEATHER

HOUR	JAN., NOV., DEC. †					FEB., OCT. ‡					MAR., APR., AUG., SEPT. ¶					MAY, JUNE, JULY §				
	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull
11 A.M. to 1 P.M.	$\frac{1}{32}$	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{32}$	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{50}$	$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{1}{60}$	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$
10-11 A.M. and 1-2 P.M.	$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{40}$	$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{2}$	$\frac{1}{60}$	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$
9-10 A.M. and 2-3 P.M.	$\frac{1}{12}$ *	$\frac{1}{6}$ *	$\frac{1}{3}$ *	$\frac{2}{3}$ *	$1$ *	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$1$ *	$\frac{1}{40}$	$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{2}$	$\frac{1}{50}$	$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$
8-9 A.M. and 3-4 P.M.						$\frac{1}{5}$ *	$\frac{1}{2}$ *	$1$ *	$1\frac{1}{2}$ *	$3$ *	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$
7-8 A.M. and 4-5 P.M.											$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{4}$	$\frac{3}{4}$	$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{3}$	$\frac{2}{3}$
6-7 A.M. and 5-6 P.M.											$\frac{1}{15}$ *	$\frac{1}{8}$ *	$\frac{1}{2}$ *	$\frac{3}{4}$ *	$1$ *	$\frac{1}{15}$ *	$\frac{1}{8}$ *	$\frac{1}{4}$ *	$\frac{1}{2}$ *	$\frac{3}{4}$ *
5-6 A.M. and 6-7 P.M.																$\frac{1}{10}$ *	$\frac{1}{5}$ *	$\frac{1}{3}$ *	$\frac{2}{3}$ *	$1\frac{1}{2}$ *

The exposures given are approximately correct, provided the shutter-speeds are accurately marked. In case the results are not just what you want, use the tables merely as a basis and increase or decrease the exposure to fit the conditions. Whenever possible keep the shutter-speed uniform and vary the amount of light when necessary by changing the stop. Focal-plane shutters require only one-third of the exposures stated above.

**SUBJECTS.** For other subjects, multiply the exposure for an average landscape by the number given for the class of subject.

**1/8 Studies of sky and white clouds.**

**1/4 Open views of sea and sky;** very distant landscapes; studies of rather heavy clouds; sunset- and sunrise-studies.

**1/2 Open landscapes without foreground;** open beach, harbor- and shipping-scenes; yachts under sail; very light-colored objects; studies of dark clouds; snow-scenes with no dark objects; most telephoto-subjects outdoors; wooded hills not far distant from lens.

**2 Landscapes with medium foreground;** landscapes in fog or mist; buildings showing both sunny and shady sides; well-lighted street-scenes; per-

sons, animals and moving objects at least thirty feet away from the camera.

**4 Landscapes with heavy foreground;** buildings or trees occupying most of the picture; brook-scenes with heavy foliage; shipping about the docks; red-brick buildings and other dark objects; groups outdoors in the shade.

**8 Portraits outdoors in the shade;** very dark near objects, particularly when the image of the object nearly fills the plate and full shadow-detail is required.

**16 Badly-lighted river-banks,** ravines, glades and under the trees. **Wood-interiors** not open to the sky. **Average indoor-portraits** in a well-lighted room, light surroundings.

**PLATES.** When plates other than those in Class I are used, the exposure indicated above must be multiplied by the number given at the head of the class of plates.

# For Perpetual Reference

For other stops multiply by the number  
in the third column

As all the figures in the table opposite are based upon the use of stop F/8, or U. S. 4, it does not appear here among the ratios for other stops.	U. S. 1	F/4	× 1/4
	U. S. 2	F/5.6	× 1/2
	U. S. 2.4	F/6.3	× 5/8
	U. S. 3	F/7	× 3/4
	U. S. 8	F/11	× 2
	U. S. 16	F/16	× 4
	U. S. 32	F/22	× 8
	U. S. 64	F/32	× 16

## Example

The factors that determine correct exposure are, first, the strength of light; second, the amount of light and dark in the subject; third, speed of plate or film; fourth, the size of diaphragm used.

To photograph an average landscape with light foreground, in Feb., 2 to 3 p.m., bright sunshine, with plate from Class 1, R. R. Lens, stop F/8 (or U. S. 4). In the table look for "Hour," and under the column headed "Bright Sunshine," note time of exposure, 1/16 second. If a smaller stop is used, for instance, F/16, then to calculate time of exposure multiply the average time given for the F/8 stop by the number in the third column of the table for other stops, opposite the diaphragm chosen. The number opposite F/16 is 4. Multiply  $1/16 \times 4 = 1/4$ . Hence, the exposure will be 1/4 second.

For other plates consult the table of plate-speeds. If a plate from Class 1/2 be used, multiply the time given for average exposure, F/8 Class 1, by the number of the class.  $1/16 \times 1/2 = 1/32$ . Hence, the exposure will be 1/32 second.

## Speeds of Plates on the American Market

Class-Numbers. No. 1, Photo-Era. No. 2, Wynne. No. 3, Watkins

Class 1/3, P. E. 156, Wy. 350, Wa.  
 Ilford Monarch  
 Lumière Sigma  
 Marion Record  
 Seed Graflex  
 Wellington Extreme

Class 1/2, P. E. 128, Wy. 250, Wa.  
 Ansco Speedex Film  
 Barnet Super-Speed Ortho.  
 Central Special  
 Cramer Crown  
 Eastman Speed-Film  
 Hammer Special Ex. Fast  
 Imperial Flashlight  
 Seed Gilt Edge 30  
 Wellington 'Xtra Speedy

Class 3/4, P. E. 120, Wy. 200, Wa.  
 Barnet Red Seal  
 Cramer Instantaneous Iso.  
 Defender Vulcan  
 Ensign Film  
 Hammer Extra Fast, B. L.  
 Ilford Zenith  
 Imperial Special Sensitive  
 Paget Extra Special Rapid  
 Paget Ortho. Extra Special Rapid

Class 1, P. E. 111, Wy. 180, Wa.  
 American  
 Ansco Film, N. C.  
 Atlas Roll-Film  
 Barnet Extra Rapid  
 Barnet Ortho. Extra Rapid  
 Central Comet  
 Imperial Non-Filter

Imperial Ortho. Special Sensitive  
 Kodak N. C. Film  
 Kodoid  
 Lumière Film and Blue Label  
 Marion P. S.  
 Premo Film-Pack  
 Seed Gilt Edge 27  
 Standard Imperial Portrait  
 Standard Polychrome  
 Stanley Regular  
 Vulcan Film  
 Wellington Anti-Screen  
 Wellington Film  
 Wellington Speedy  
 Wellington Iso. Speedy  
 W. & W. Panchromatic

Class 1 1/4, P. E. 90, Wy. 180, Wa.  
 Cramer Banner X  
 Cramer Isonon  
 Cramer Spectrum  
 Defender Ortho.  
 Defender Ortho., N.-H.  
 Eastman Extra Rapid  
 Hammer Extra Fast Ortho.  
 Hammer Non-Halation  
 Hammer Non-Halation Ortho.  
 Seed 26x  
 Seed C. Ortho.  
 Seed L. Ortho.  
 Seed Non-Halation  
 Seed Non-Halation Ortho.  
 Standard Extra  
 Standard Orthonon

Class 1 1/2, P. E. 84, Wy. 160, Wa.  
 Cramer Anchor

Lumière Ortho. A  
 Lumière Ortho. B

Class 2, P. E. 78, Wy. 120, Wa.  
 Cramer Medium Iso.  
 Ilford Rapid Chromatic  
 Ilford Special Rapid  
 Imperial Special Rapid  
 Lumière Panchro. C

Class 3, P. E. 64, Wy. 90, Wa.  
 Barnet Medium  
 Barnet Ortho. Medium  
 Cramer Trichromatic  
 Hammer Fast  
 Ilford Chromatic  
 Ilford Empress  
 Seed 23  
 Stanley Commercial  
 Wellington Landscape

Class 5, P. E. 56, Wy. 60, Wa.  
 Cramer Commercial  
 Hammer Slow  
 Hammer Slow Ortho.  
 Wellington Ortho. Process  
 W. & W. Process Panchromatic

Class 8, P. E. 39, Wy. 30, Wa.  
 Cramer Contrast  
 Cramer Slow Iso.  
 Cramer Slow Iso. Non-Halation  
 Ilford Halftone  
 Ilford Ordinary  
 Seed Process

Class 100, P. E. 11, Wy. 3, Wa.  
 Lumière Autochrome





# OUR ILLUSTRATIONS

WILFRED A. FRENCH



WE are again indebted to the Gerhard Sisters, those sympathetic interpreters of child-life, for the charming subject which adorns the current front-cover and an inside page. These prolific artists seem to have no difficulty to obtain pleasing models for their genre-pictures, and the little blonde, setting her pearly teeth into a delicious apple, does not make it clear whether the part she plays is that of Eve or of Pomona. The illusion of tasting what, to a certain young woman, was forbidden fruit is admirable. As in all of the productions of the Gerhard Sisters, the workmanship merits the highest praise. Data: Professional studio; May; Zeiss lens at full opening; 1 second.

Among the master-photographers whose work is seen only to be admired, is E. E. Doty, of Battle Creek, Mich. His women-models are always characterized by physical charm and refinement of expression. Of composition, Mr. Doty is complete master, avoiding the conventional as well as the grotesque, yet always natural. One is struck by the rare beauty of the subject, "Tender Thoughts," that glorifies the entrance of this issue by the masterly management of the light and the chemical effects which yield such superb color-values in the flesh-tones and the rest of the figure. Admirable, too, is the plastic impression or solidity of the engaging sitter — an effect gained only by complete understanding of all the resources of the art-science. The eye fairly revels in this artistic ensemble, and the mind delights to speculate upon the significance of the young woman's thoughts. The picture appeals as ardently to the eye as to the imagination. Data: Professional studio; diffused light from skylight; fire-effect from 300-Watt nitrogen lamp; 11 x 14 portrait-camera; B. Suter lens; 28-inch focus; stop, F/6; exposure about 10 seconds; Hammer Red Label; pyro; 11 x 14 Royal Bromide print.

The achievements in portraiture by Dr. T. W. Kilmer, an avowed and distinguished amateur, have attracted so much favorable attention from the readers of PHOTO-ERA that many have expressed the wish to be favored by the artist's recital of his *modus operandi*, so that they might sip from the fountain of his knowledge. He has consented quite generously to accede to this general request, and his story, as told in these pages, is a clear statement of his manner of procedure, together with his sane and candid views on fallacies in photographic portraiture. The wisdom of his comments and practical advice will be valued by professionals and advanced amateurs alike. Rarely has a treatise on the most difficult branch of photography — home-portraiture — been treated in so masterly a fashion, and by an amateur, too, and supported by such admirable and convincing practical examples, as this contribution by Dr. Kilmer. Data: Portrait of Miss A. — 11 x 14 camera; 18-inch Verito lens; stop, F/5.6; light from window; 5 to 10 seconds; 11 x 14 Stanley; M. Q.; 11 x 14 Artura print. Portraits of Dr. M. and Dr. S., also portrait-study (old man with pipe), same data as portrait of Miss A.

The view in the Public Garden, Boston, presented on page 166, is one of the numerous Honorable Mention prints of the "Garden-Scenes" competition. For no special reason that we can remember, a mounted print of Vincent Driscoll's picture has been resting on a shelf

in the Editor's room since last November. At first, it made a favorable impression and, as the original scene is only a few hundred feet distant — around the corner — it is beheld by the Editor several times during the week. The print was found to wear well; in fact, it improved on steady acquaintance, until, at last, it was sent away to be halftoned. As it appears here, it is constructed solidly and produces a strong and satisfying impression. The light was well chosen, producing pleasing and helpful shadows. There is a well-expressed feeling of interest, unity and proportion, imparting an air of distinction to a particular spot marked by unsuspected pictorial charm. Data: October 13, 1915; bright sun, but hazy; about 7.30 A.M.; Multispeed camera; 6½-inch Verito lens; stop, F/6; ⅓⁄⁵ second; Standard Polychrome; pyro; enlarged on Eastman Standard Bromide C (8 x 10).

The photographs that accompany H. L. Gleason's lesson on how to manage trees in pictorial photography give evidence of the writer's splendid executive ability, and add force to his arguments. Mr. Gleason's sound knowledge of the rules of pictorial composition is enhanced, in an eloquent degree, by his own pencil-sketches. The article and illustrations constitute an invaluable aid to aspiring photo-pictorialists. Data: 5 x 7 Pony Premo No. 2; B. & L. R. R. lens; 8-inch focus; F/16; April, July and August, 2 P.M.; 1 second; Premo Film-pack; Hydro-Metol; Glossy Cyko.

Among the favorite aquatic sports is the balancing of a swimmer on a board, drawn as evenly as possible by a swiftly moving motor-boat. The feat requires considerable physical skill, and the sensation of being pulled rapidly through noisily foaming waters is said to be quite exhilarating. The exploit is illustrated in a picturesque manner by Mr. Elder's photograph, page 174. The young woman-athlete is performing her part with successful daring and grace, and her muscular and well-shaped figure is relieved strikingly against the agitated waters. The excellence of Mr. Elder's work is clearly shown. Data: June afternoon; intense sun; 1-A Speed-Kodak; Zeiss-Kodak lens; 5-inch focus; stop, F/6.3; exposure about ⅓⁄⁴⁰ second; Eastman N. C. film. The model, 16 years old, is being towed at the rate of about thirty miles an hour.

Among the garden-spots of New England is Mount Desert (pronounce, Mount Dez'-ert) on the coast of Maine. Its natural beauties, forests, hills and a bay with a number of rock-bound islands, have been admired by tourists and native residents to the extent that, as the result of many years' arduous and unselfish work by a few men of wide vision, the region has been set aside by the Federal Government as a public recreation-ground, under the name of the Sieur de Monts National Park. The view by George R. King, page 175, shows Frenchman's Bay from Mt. Desert Island, on which is situated the celebrated summer-resort, Bar Harbor, with its numerous summer-residences of marked architectural beauty. Mr. King has devoted himself assiduously to the task of photographing Mt. Desert in its many aspects, and his extensive collection of views attests his eminent artistic skill. No data.

The impression of New York along the East River, in the neighborhood of Brooklyn Bridge, as depicted by the camera of Joseph Maerz, page 178, is typical and

pictorial. There is freedom, spontaneity and harmony in the composition — no obvious adherence to rules or tradition. Though the light was clear at the time of the exposure, there appears to have been enough haze in the atmosphere to produce a touch of the imaginative quality. This effect was enhanced in the enlarging by diffusion with a soft-focus lens. Data: August, 5.30 P.M.; fair light;  $3\frac{3}{4} \times 4\frac{1}{4}$  Hawk-Eye; 5-inch Zeiss-Kodak lens; stop, F/11;  $\frac{1}{25}$  second; Eastman N. C. film; M. Q.;  $9 \times 14$  bromide enlargement with a Smith Semi-Achromat lens.

### Advanced Competition

As a wide range was given the participants in the "Nature-Study Subjects" competition, the jury was justified to bestow official recognition on Mr. Heebner's startling theme, "The Wounded Hawk," page 180. How much the photographer had to do with the arrangement of the subject — the fierce attitude of the bird and its simulated attempt to withdraw the deadly arrow — is not stated. But he deserves much credit for the idea or the selection, and, notably, for the point of view and eminent executive ability. Data: July; good light; Wollensak Velostigmat; 12-inch focus; stop, F/45; 20 seconds; Seed Commercial Ortho; pyro; B. & J. series A. ray-filter, print, Prof. Cyko.

Of winning, artistic beauty is the "Nectar-Gatherer," page 183. The conception and arrangement merit the highest commendation. So do the illumination, judicious subordination of detail and chemical effect. Data: Study of butterfly and white Cosmos. Owing to conditions, it was considered advisable to do the work indoors, so the group was arranged about eighteen inches from the east window, near noon, on a November day. Diffused light; 20 seconds; Ilex Anastigmat; stop, F/16; Ingento A. ray-filter; Roebuck D. C. Ortho. As the butterfly, when found, was rather dormant from the effects of the cool air, there was no trouble experienced from motion during this exposure. Print, Enlarging-Cyko, Plat. surface.

As a purely open-air subject, one welcomes "The Frog," page 184. The setting is appropriately local and typical without detracting from the importance of the "sitter." The subject is not particularly handsome, nor calculated to arouse one's artistic ardor; but Mr. Baker has succeeded in investing it with pictorial interest. Data: August, 2.30 P.M.; bright sun;  $5 \times 7$  view-camera; 8-inch R. R. lens; stop, U. S. 128; Forbes Ortho; pyro in tray; print, Enlarging-Cyko Linen.

The cobweb, by Mr. Field, page 186, is an unusually fine example of this popular theme. Suspended in artistic fashion, and displayed to excellent advantage, the delicate fabric excited one's admiration. Most subjects of this kind suffer from unfavorable surroundings, and when found free of objectionable features, including weather-conditions, the photographer needs to exert himself considerably in order to capture the prize. No data.

With the instincts of a true lover of nature, Mr. Stelcik was quick to observe the ordinarily trifling episode depicted on page 187. It is interesting to note how the artist seized upon the little incident and converted it into a pleasing, well-arranged picture. Data: June, at 3 P.M.; bright light;  $5 \times 7$  Conley camera; R. O. lens; stop, F/8;  $\frac{1}{25}$  second; Standard Ortho; pyro, in tray; Azo D print.

### Beginners' Competition

"BREAKERS," page 191, commands admiration on account of the force and breadth of treatment. There is a suggestion of vitality and power in the foaming mass, receding to hurl itself with undiminished force

against the rocky cliff. The scene is typical of the Maine coast, and serves to display the artist's uncommon skill as a pictorialist. Nothing could be finer, in a marine of this character, than the management of the material presented — the pitting of the white mass of seething, moving waters against the dark, unflinching stone. Data: March, noon; dull light;  $3\frac{1}{4} \times 4\frac{1}{4}$  Graflex; 7-inch Verito; stop, F/4; 3-time color-screen; Standard Orthonon; pyro;  $3\frac{3}{4} \times 4\frac{1}{4}$  (direct) print on matte surface paper.

In examining Mr. Wilson's admirable composition, "Hard Sledding," page 192, one is impressed with the judicious arrangement of the group. In using similar scenes as camera-subjects, many photographers take little heed of the placement of the horses, when differing in color, or of the garb of the driver. Examples to show the absence of taste, resulting in lack of balance that characterizes most ploughing-scenes, are not necessary. The student can imagine easily what would be the effect were the driver, or farmer, in Mr. Wilson's picture represented as walking behind the white horse, or were the animals to exchange places and the man to be seen behind either horse. The artist, here, probably had these contingencies in mind and thus averted a grave pictorial error. His picture excels, too, in originality of pictorial design and sense of proportion. Data: September, 9 A.M.; bright light;  $2\frac{1}{4} \times 3\frac{1}{4}$  Icarette;  $3\frac{3}{8}$ -inch Carl Zeiss Icar lens; stop, F/9; exposure  $\frac{2}{5}$  second; Eastman N. C. film; Kodak-powders in tank; print, P. M. C. No. 3, with Adolol.

It is interesting to note the success with which Mr. Upton, in his wood-interior, page 193, has used sunlight and yet avoided the danger of spottiness. The road is flecked with patches of sunlight; but approaching, as it does, the character of the sun-laden wood, and having good tone-values — due to intelligent exposure — the path escapes criticism. The whole effect is consistently harmonious. Data: July 9, 1916; bright sun; 3 A Kodak; Eastman N. C. film; M. Q.; B. & L. R. R. lens; stop, U. S. 8; exposure, 2 seconds; print, Special Royal Velox.

### Hazardous Photography

THE temptation to make a snapshot under excitement, when subsequent restraint proves the better judgment, has been experienced by many a camerist. Unfortunately, an impulsive use of the camera may have regrettable consequences, as has frequently been the case. In certain circumstances it is very much like a child playing with fire. The freedom with which the camera is operated at the seashore, picnic-parties and "up the river" is a caution. It may be the means to make friends, but not without causing embarrassments and misunderstandings. To snap the camera at ladies in bathing-costume, without their expressed permission, is an act unbecoming a gentleman.

There are other occasions where it would be unwise to expose the camera. To snapshot a friendly couple, neither married nor engaged, may be fun for the camerist; but it may lead to unpleasant results. The same is true when some one makes a flashlight of a group of quiet merrymakers, seated on the hotel veranda amid Cimmerian darkness. There is no doubt of the sensation caused by this unexpected revelation; but the fate that overtakes the camerist is nothing by comparison.

Photographs of a compromising character are very apt to lead the photographer into trouble. To this class belong combination-pictures made for the purpose of proving an alibi. However successful such a picture may be, there is generally on hand a photographic expert who can explain to the satisfaction of the court the *modus operandi* of the deception.

W. A. F.





# ON THE GROUND-GLASS

WILFRED A. FRENCH



## A Case for the Tripod

It was a fashionable September wedding, and the ceremonies took place in a pine-grove near the bride's home, not far from Boston. Invited guests provided with hand-cameras eagerly "snapped" memorable scenes of the event, but ignorant of the fact that, though the sun was shining, the light was weak, being largely screened by branches all about. Many were the requests for prints; but every one was doomed to be disappointed, for the largest stop used was F/8, and virtual blanks were the general result.

## An Unfortunate Blunder

Mrs. X., a well-known traveler and lecturer, returned last June from a special visit to Japan, where she exposed forty rolls of film, of twelve exposures each. She is booked to tour in the United States during the coming winter, giving a series of illustrated lectures on the temples of Japan. Her first thought, after her return to Boston, was the development of her films, which important task she entrusted to an experienced photo-finisher and dealer in that city. The expert appreciated the responsibility of the job and enjoined his assistant to be specially careful, and to report to him as the work progressed.

Shortly after the work had been started, the assistant emerged from the basement laboratory somewhat alarmed and holding six long strips of developed film in his hand. They were blanks, one and all! Of course, it was decided at once to stop right there and to investigate the cause. Films of other customers were then developed and turned out satisfactorily, which proved that the solutions were not at fault. *The films of Japan had not been exposed.* That point could not be disputed; and it was only fair to assume that the rest of the films would prove to be equally disappointing.

The proprietor, eager to learn the cause of the trouble, immediately telephoned Mrs. X. to bring in her camera, just as it was, and on no account to open it. Presently the lady appeared, carrying in her hand the fateful camera. She was requested to manipulate it just as she did when in Japan. As she detached the camera-back — to show how she removed the exposed film and inserted a fresh one — the first thing that the expert noticed was a leather cap covering the rear-lens. Desiring to have a specially efficient outfit, Mrs. X. had allowed her dealer — a firm on the Pacific Coast — to order a German anastigmat from New York. The lens arrived fitted to a standard shutter, each end being covered with a leather cap. When her dealer attached this combination to the camera, he failed to remove the rear-cap. In demonstrating the camera to his customer — who knew nothing, whatever, about photographic equipments — the salesman naturally urged that the cap on the front lens be removed before making an exposure, but, before closing the camera for any great length of time, it be replaced so as to protect the lens. Somehow, it never occurred to him to mention the cap on the rear lens, and hidden from view.

The owner had obeyed instructions faithfully, as she demonstrated to the photo-finisher; but, knowing nothing about photography, beyond the mechanical operations necessary to make exposures and to load and unload her camera, she had failed to notice the cap that

rested, undisturbed all the while, on the rear end of the lens, thus making exposures utterly impossible. In this way she lost the opportunity to bring home original pictures so essential to the success of her coming lectures. Of course, the Western dealer made good to her the price of the wasted films; but this restitution did not lessen her bitter disappointment.

## An Adventurous Moth

MR. GEORGE B. KEMP, JR., a conscientious reader of this column, sent me an interesting nature-study, preferring that it be used for the "Ground-Glass," rather than for the "Nature-Study Subjects" competition, recently closed. Mr. Kemp's notes about the picture are as follows:

"The cocoon from which the moth came had been watched carefully all winter by the pupils of the 1B Grade in the William McKinley School, Indianap-



THE ADVENTURE

GEORGE B. KEMP, JR.

olis. Under the teacher's guidance, there was much speculation — when the warm spring-days came — as to whether anything would develop from the cocoon, also when and what.

"On their arrival at school, one Monday morning, the pupils found that the cocoon had opened, but the contents of the cocoon was not visible, for in defiance of all conventions, instead of remaining sitting on the twig kindly provided, the contents had wandered off. After a search, the moth was discovered sitting on the tail of a toy cat, on top of a cupboard. It permitted itself to be moved, still clinging to its cat, and in this position was placed on a window-sill, where it remained, much to the delight of the children and the amusement of the adults, for several days, until, taking advantage of the opened window, it flew away.

"I might add that I got the picture through the courtesy of the teacher, who knows my fondness for picturing the unusual, and so sent for me."



# EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication



## Photographers' Association of New England Eighteenth Annual Convention

September 12, 13 and 14, 1916

This annual event, of special interest to the New England professional photographers, was held as usual at Copley Hall, Boston. Though business among some of the large industries has been exceedingly prosperous since the European war began, the portrait-photographers of the United States have not been so happily placed. Many persons regard portraits by photography as a sort of luxury. Others, not appreciating all that enters into the making of a first-class photograph, think that the photographer is overcharging when he asks even \$18.00 a dozen. Then, when another artist makes them, equally good, at \$6.00 a dozen — why, they simply cannot understand it. Sometimes they patronize the lower-priced craftsman; sometimes not. In any event, the business is good in some parts of the country, and in very many of the smaller cities and towns of New England it is just the opposite. This condition, which cannot last always, prevented many members of the P. A. of N. E. living at a distance from attending the convention this year; consequently the attendance was relatively small — about 250 photographers, dealers and assistants. Nevertheless, the affair passed off pleasantly, and all but the dealers were satisfied. The photographer carried home new and practical ideas for use in the studio, the darkroom and the business. President Champlain gave up the mornings of the first two days to personal demonstrations, in his Tremont Street studio, of posing, lighting and the development of expression; and all agreed that never did an artist of Mr. Champlain's ability and industry give more convincingly and generously of his own cherished ideals in portraiture. Each morning the premises were filled to overflowing with interested visitors.

The address of welcome was delivered in the lecture-hall by J. Frederick Hopkins, director of the Normal Art School of Massachusetts, and produced a delightful impression. John I. Hoffman, secretary of the National Association, spoke briefly on the benefits of membership in the P. A. of A. This was followed by impromptu discussions, by members, on practical topics.

The studio-demonstration by President Champlain consumed virtually the entire forenoon. The afternoon-session was devoted to an admirable address, "Promotion of Trade-Department for the Studio," delivered by Mr. J. A. Dawes, of the Wollensak Optical Company, loudly applauded for his remarkably successful effort. A talk on the national association by Secretary Hoffman and short addresses by members followed.

On the first evening, Mr. A. E. Whitney, of Norwood, Mass., gave a very profitable lantern-talk on home-made devices, such as enlarging-apparatus; a print-dryer; adjustable darkroom-apron; a print-trimmer; an office-index for unfilled orders, and screens for novel lighting-effects in the studio and home-portraiture.

He was followed by Mr. Frederick E. Ives, inventor of the Kromscope and several important processes of color-photography, who read an interesting paper on the Hess-Ives Process (Hicrography), a successful method of producing color-photographs on paper.

Mr. Henry Hess, of the Hess-Ives Corporation, then spoke on the business-side of Mr. Ives' subject, and a spirited discussion followed between Mr. Hess and some of his listeners, the former expressing his utmost faith in the ultimate adoption, by every portrait-photographer, of the Hess-Ives process of color-photography on paper.

The evening of the second day saw the discriminating ones at the convention-dinner served at the Lenox, 111 ladies and gentlemen being present. President Champlain, his own master of ceremonies, surprised even his intimate friends with an unsuspected gift of speech and reservoir of wit. He referred to the persons he invited to speak with a startling frankness and picturesque humor that made even the tables vibrate with mirth. Among the victims called upon to perform feats of oratory, but who proved wholly unprepared, were John P. Haley, his son, R. D. Haley, A. Allyn Bishop, John H. Garo, George H. Hastings, W. H. Partridge, Miss Hallie Wilson, J. C. Bushong, Miss Eve Proctor (Mr. Champlain's business-manager), John I. Hoffman and Frank R. Barrows. H. A. Collings was the only one who was equal to the occasion, and excelled in the importance of his topic and in fluency of speech. The banquet-room was then cleared of its furniture, and those who were not too exhausted after listening to the president's mirth-provoking remarks indulged in dancing till midnight.

### The Charter of the P. A. of N. E.

Last session, afternoon of the third day. Beside the regular reports from the several committees, there was the presentation to the Association of its charter, from the parent body, the Photographers' Association of America, by National Secretary John I. Hoffman.

### Presentation to Secretary Hastings

A complete surprise to the recipient, Secretary George H. Hastings was the presentation of a purse of \$87 in gold from his friends at the convention. Mr. Hastings it was who organized the Photographers' Association of New England, served two years as its first president and ten years as its secretary. Having completed a ten-year term of hard and faithful service, and won the love and respect of every member of the Association, Mr. Hastings declined a renomination.

### The Next Place of Meeting

Providence, the capital of Rhode Island, will entertain the next convention, in 1917. The Chamber of Commerce extended the invitation, a free hall, free transportation, both ways, of the Association's paraphernalia, and a free excursion together with a genuine Rhode Island clam-bake. The dates of the meeting will be announced as soon as determined by the new board.

### An Association-Fund

Frank R. Barrows arose at this meeting and stated that he would be one of 100 members to give \$5.00 towards a fund to be placed at the disposal of the Association. Immediately 34 members signified their readiness to contribute \$5.00 towards such a fund, and



there is every prospect that the remaining 65 contributors will soon be found among those who failed to attend this year's convention.

#### Manufacturers and Dealers

The manufacturers and dealers were represented as follows:

The AnSCO Company, with an adequate force, including W. A. Rockwood and Frank N. Leache, had a beautiful display of prints on Cyko Buff and Cyko Plat — collections by Garo, Clarence H. White, Hollinger, Noetzel, Carins, Goldensky, Towles, Bachrach, Champlain, Walters, Mersereau, Lee Brothers, Wittler, Mae L. Smith and Alice Boughton.

Bridges Mfg. Co., Rochester, photographic mounts.

California Card Mfg. Co., San Francisco, mounts and folders.

The Central Dry-Plate Company had the beautiful harmonious collection of prints that was so much admired at the Cleveland Convention last July.

A. M. Collins Manufacturing Company, artistic folders and mounts.

The Cramer Dry-Plate Company's expected show of prints was in charge of J. W. Beattie and R. P. Brackett. As it failed to arrive, the allotted wall-space was speedily filled with humorous impromptu pencil-sketches, mostly of real and of imaginary persons, by innocent visitors who were beguiled by the irresistible Mr. Beattie into manipulating the pencil to "help out."

The Eastman Kodak Company occupied its usual space, the platform, around which was hung a relatively small but exceedingly choice collection of portraits by master-photographers, each represented by six superb prints. They were Pirie MacDonald, Eugene Hutchinson, J. H. Garo, Dudley Hoyt, Frank Scott Clark, S. L. Stein, C. M. Hayes and E. E. Doty. The exhibit was in charge of Harry M. Fell, assisted by a corps of nine experts.

Ralph Harris & Company, Boston, photo-supplies. Sole American agents for Wellington plates and papers.

The Hess-Ives Corporation, Philadelphia. In charge of Henry Hess and Frederick E. Ives, who explained their improved process of color-photography on paper, as exemplified by a number of highly successful color-prints by such well-known photographers as Elias Goldensky and Dr. Arnold Genthe.

Kroner Photo-Print Dryer Company, Chicago. Their machine is considered one of the most practical and reliable labor-saving devices on the market.

Andrew J. Lloyd & Company, Boston, photo-supplies.

Pinkham & Smith Company, Boston, photo-supplies. P. & S. Semi-Achromatic lenses, repairing high-class cameras, shutters and lenses.

Robey-French Company, Boston. Latest models of cameras for portraits and views, rapid-printing machines, developing-tanks and other important up-to-date apparatus and devices.

Taprell-Loomis Company, Chicago. Latest styles in mountings for portraits.

Willis & Clements, Philadelphia. Platinotype and Japine Silver Papers. Beautiful display of prints.

Wollensak Optical Company, Rochester, N. Y. In personal charge of J. A. Daves. Display of photographs by the leading workers, illustrating the sterling merits of the Verito, Velostigmat and other lenses of their construction.

#### Awards for Pictorial Merit

##### GRAND PORTRAIT CLASS

There were twenty-two entries in this important competition, though three of them were genres. The solid-gold medal was captured by A. K. Peterson, of

Hartford, Connecticut, for a large portrait of a young woman, treated conventionally throughout, but pleasing. This competition was for one picture only, 8 x 10 or larger, open to the world.

#### THE CHAMPLAIN TROPHY-CUP

There were nine entries in this competition, each composed of three portraits made on 8 x 10 plates or smaller. The sterling-silver cup, ten inches high, was offered by Orrin Champlain, president of the P. A. of N. E., and was awarded to the Irving Kimball Studio, Boston. The successful set consisted of a group, a full-length, seated figure of an old lady and a portrait of a little child.

#### WOLLENSAK TROPHY-CUP

The cup, a counterpart of one awarded twice to W. H. Partridge, was won by W. A. Sands, of Brookline, Mass. There were eleven entries this year, viz., R. D. Haley, J. C. Bushong, W. A. Sands, M. B. Parkinson, Jared Gardner, William Godfrey, the Rand Studio, the Peterson Studio, Wm. J. Thibeault, the Whitney Studio and E. R. Trabold.

#### AWARDS IN THE STATE-EXHIBITS

The first state-prize, for Maine, to the Matthews Studio; the second to M. D. Hanson, of Portland.

The first, for New Hampshire, to Claude L. Powers, of Claremont; the second to the Andrews Studio.

The first, for Vermont, to Katherine Bingham, of St. Johnsbury; the second to A. Allyn Bishop, of Newport.

The first, for Massachusetts, to J. C. Bushong, of Worcester; the second to Whitman Studio, of Malden.

The first, for Rhode Island, to J. A. Vandall, of Pawtucket, the only entry.

The first, for Connecticut, to A. K. Peterson, of Hartford; the second to George E. Tingley, of Mystic.

The prize in the Landscape-class was awarded to George E. Tingley, of Mystic, Connecticut.

The prize in the Commercial class was awarded to E. Nicolai, of Palmer, Mass. There was no other entry.

#### The New Executive Board

President, M. D. Hanson, Portland, Maine.  
First vice-president, Louis F. Bachrach, Boston, Mass.  
Second vice-president, A. K. Peterson, Hartford, Conn.  
Treasurer, Eugene A. Holton, Boston, Mass.  
Secretary, A. E. Whitney, Norwood, Mass.

#### State Vice-Presidents

For Maine, Harry Plummer, Lewiston.  
For New Hampshire, L. G. Ross, Newport.  
For Vermont, Katherine Bingham, St. Johnsbury.  
For Massachusetts, Ralph A. Schein, Chelsea.  
For Rhode Island, John Sabine, Providence.  
For Connecticut, R. D. Haley, Bridgeport.  
For Maritime Provinces, Edson Graham, Wolfville, N. S.

#### The Display of Autochromes

The display of autochromes was placed in the center of the large hall, and was so arranged that pure daylight came from the unobstructed skylight overhead. Will Rounds, professional autochromist, contributed twenty-seven plates, which, for variety of subject and beauty of execution, were easily the best. Hiram Merrill, of Concord, N. H., had eighteen, and the Kimball Studio four plates, all being delightful themes and admirably done.

## The Pictorial Exhibits

The pictorial exhibits were very interesting in the main. Of course, the collections of carefully selected prints from negatives by the foremost professional workers in America, shown by the manufacturers of plates, lenses and paper, are far ahead of anything the Association can accomplish in this respect. Nevertheless, the individual exhibits cannot and should not be overlooked. Aside from the numerous special displays, already referred to in this report, there were several complimentary ones of unusual merit, notably the selected prints constituting the 1916 Salon of the P. A. of A. The complimentary exhibits of home-portraiture by Louis F. Bachrach, the Kindergraph Studio, the Irving Kimball Studio, and H. H. Pierce, of Boston; F. A. Frizzell, of Dorchester; Wm. Noetzel, of Newton; Morris Burke Parkinson and W. A. Sands, of Brookline; and the Kimball Studio, of Concord, New Hampshire, showed the progress that has been made in this increasing branch of photography.

## The Photographic Press

The photographic publications represented were *Abel's Weeklies*, by Charles L. Abel; *American Photography*, by Frank R. Fraprie; *The Bulletin of Photography*, and *The Camera*, by Mr. and Mrs. Frank V. Chambers, and *Photo-Era*, by Wilfred A. French, assisted by Miss Annie Cameron.

## Photo-Era a Reference-Library

(Continued from August issue)

THERE is no better reference-library of photography than that provided by back numbers of PHOTO-ERA. The variety of subjects treated has been great; the writers include the best authorities and most successful practical workers, both professional and amateur, and most of the articles are illustrated. Regular readers who have kept a file of the magazine, or had each volume bound, will find the appended classified lists and those to be published in subsequent issues of value for reference. **Missing copies may be had at 25 cents each as long as the supply lasts.**

### COMPOSITION AND ART-PRINCIPLES

The Education of the Photographic Artist	Paul Lewis Anderson	Dec., 1915
Artistic Feeling in the Snapshot	Will W. Todd	Dec., 1915
Photography as a Means of Expression	Bertrand H. Wentworth	July, 1915
Can the Camera Create?	William Findlay	May, 1915
The Consideration of the Picture on the Ground-Glass	John W. Gillies	May, 1915
Is There a Place Left for Straight Photography?	Sigmund Blumann	Jan., 1915
Pictorial Landscape-Photography. I	Paul Lewis Anderson	Sept., 1914
Pictorial Landscape-Photography. II	Paul Lewis Anderson	Oct., 1914
Pictorial Landscape-Photography. III	Paul Lewis Anderson	Nov., 1914
Pictorial Landscape-Photography. IV	Paul Lewis Anderson	Dec., 1914
Pictorial Landscape-Photography. V	Paul Lewis Anderson	Jan., 1915
Pictorial Landscape-Photography. VI	Paul Lewis Anderson	Feb., 1915
Constructive, Helpful Criticism	Sigmund Blumann	Sept., 1914
The Figure in Landscape	Henry R. Poore	Jan., 1914
Principles of Composition	Arthur W. Dow	April, 1913
Art and the Exact Sciences	Right Hon. Lord Rosedale, K.C.B.	June, 1912
Independent Criticism	William H. Blacar	Oct., 1912
Epitaphs, Pictorial Photography and the Art-Critic	Charles J. Adams	Oct., 1912
Different Kinds of Pictures	Arthur Hammond	Sept., 1912
Pictorial Surgery	William Howe Downes	Aug., 1912
On Print-Criticism	Virginia F. Clutton	Aug., 1912
A Plea for Straight Photography	Dan Dunlop	May, 1912
Admiring Bad Pictures	William Howe Downes	Dec., 1909
How the Painters Do It	F. A. Waugh	Sept., 1909
Art-Appreciation in Europe and America	Alon Bement	Dec., 1908
The Decorative Aspect of Photography	A. H. Blake, M.A.	June, 1908
Some Notes on Composition in Landscape	Horace Mummery	May, 1908
The Point of View	Esther Matson	Feb., 1908

Individuality as Shown by Different Interpretations of the Same Scene	Phil M. Riley	Nov., 1907
Perceptions of the Visual Sense	C. Baumann	Aug., 1907
Impressionism in Landscape-Photography	James C. Savery	May, 1907
Fuzziness	Horace Mummery	April, 1907

### DEVELOPING

Extra Rapid Fixing-Baths	C. Welborne Piper	Nov., 1915
Pyro-Acetone Developer as a Preventive of Halation	William H. Zerbe	Sept., 1915
The Ideal Portrait-Negative	David J. Cook	June, 1914
Water for Photographic Purposes	David J. Cook	Mar., 1914
The Development of Film-Packs	E. L. C. Morse	Mar., 1914
One Developer for Plates, Films and Papers	Phil M. Riley	Mar., 1914
The Development of Outdoor-Exposures	David J. Cook	June, 1913
A Developer for Underexposed Plates	L. C. Bishop	Oct., 1912
A Standard Developer for Plates and Films	Phil M. Riley	May, 1912
Tank-Development with Rodinal	Alfred Watkins	Feb., 1912
Diamidophenol as a Developer in Tropical Countries	A. and L. Lumière and Seyewetz	July, 1911
A New Method of Tank-Development	Harold Baker	April, 1911
Time-Development for Plates and Films	Alfred Watkins	Dec., 1910
Time-Development	Gaston M. Alves	April, 1910
A Formula for Tank-Development	R. E. Crane	Mar., 1909
On the Comparative Merits of Different Developers	Malcolm D. Miller, M.D.	
I. Materials and the Criteria of Perfection		Mar., 1909
II. Developers for Negatives		April, 1909
III. Developers for Paper		May, 1909
How Far to Develop	Phil M. Riley	Dec., 1907
Pyro-Metol for Plates	Phil M. Riley	Oct., 1907
Water-Development	J. Preston	Feb., 1907
A Factorial Development-Chart	Richard Percy Hines	Jan., 1907
Development without Rocking	Rudolf Walter	Jan., 1907

### AFTER-PROCESSES

Copper Bromide for the "Equalization" of Negatives	P. H. Palmer	Oct., 1915
The Sulphide Toning of P. O. P.	H. W. Winter	Aug., 1915
An Acid Toning-Process for Developing-Out Paper	George S. Hoell	Mar., 1915
Etching in Portrait-Photography	Clara Weisman	June, 1914
A Dry Method to Improve Faulty Negatives	H. A. Stover	June, 1914
Influences Affecting Sulphide Toning	N. C. Deck	Dec., 1913
Negative-Defects, their Origin and Cure	David J. Cook	Nov., 1913
Pencil-Colored Oil-Transfers	Robert Demachy	Sept., 1913
Uranium as an Intensifier and Toner	James Thomson	Aug., 1913
Pictorial Treatment by Chemical After-Manipulation of the Negative	David J. Cook	Aug., 1913
Sulphide Toning as a Remedy for Stains	James Thomson	May, 1913
Retouching and Improving Landscape-Negatives	G. T. Harris	Sept., 1912
Re-toning by Heat	A. W. H. Weston	Mar., 1912
Helping Defective Shadows	James Thomson	Jan., 1912
Practical Retouching for Amateurs	Clara Weisman	Dec., 1911
The Art of the Retoucher	Clara Weisman	Dec., 1910
Improving Negatives of Uneven Density	Phil M. Riley	Dec., 1909
Modifying Sulphur-Toned Bromide Prints	W. J. Routley	Nov., 1909
Simple Methods of Manipulating Negatives	Walter Winchester, M.D.	Oct., 1908
Contrasty Negatives and the Remedies	James Thomson	April, 1908
Some Hints on the Toning of Bromide Enlargements	George H. Scheer, M.D.	Mar., 1908
The Photo-Chemical Activity of Uranium Nitrate	George F. Parmenter, Ph. D.	Dec., 1907
Varnishing Negatives	Victor Wilson	Dec., 1907
Transparent Spots on Negatives and How to Treat Them	Madison Phillips	June, 1907

### INTERIORS

Architectural Photography	Robert W. Tebbs	July, 1915
How to Prevent Halation	Philip Conklin	July, 1915
Extremes of Contrast Indoors and Out	George W. Harce	Oct., 1914
Interiors by Flashlight in the Home	David Bevan, M.D.	Feb., 1913
Artistic Interiors	E. H. Weston	Dec., 1911

(To be continued)



## The G. Cramer Memorial Fund

THE following is the list of contributors to the G. Cramer Memorial Fund.

A star (\*) indicates that there have been two contributions.

- Abbott, A. E., Little Falls, N. Y.  
 Abel's Photographic Weekly, Cleveland, O.  
 Allison & Hadaway, New York City.  
 American Photography, Boston, Mass.  
 Anderson, Geo. E., Springfield, Utah.  
 Anderson, H. C., Pittsburgh, Pa.  
 Anonymous, Fayetteville, Ark.  
 Anschuetz, H. M., Keokuk, Ia.  
 \*Armbruster, Henry, Mt. Vernon, N. Y.  
 Armstrong, R. B., Roachdale, Ind.  
 Baker Art Galleries, Columbus, O.  
 Baldwin Studio, Buffalo, N. Y.  
 Ball, H. Lee, Pensacola, Fla.  
 Barstow, Laura A., Burlington, Vt.  
 Bassett, W. A., Perry, N. Y.  
 \*Beach, Howard D., Buffalo, N. Y.  
 Beamer, Frank H., Buffalo, N. Y.  
 Bell, Curtis, New York City.  
 Bennett, Mrs. H. H., Kilbourne, Wis.  
 Bertrand, J. T., St. Louis, Mo.  
 Biddle, W. A., London, O.  
 Biglow, L. G., Ronan, Mont.  
 Billings, E. T., Racine, Wis.  
 Billington, J. A., Lakeville, Minn.  
 Bish, A. A., Chippewa Falls, Wis.  
 Bliss, Harry A., Buffalo, N. Y.  
 Blodgett, Winifred, Blanford, Mass.  
 Boerger, J. C., Topeka, Kas.  
 Bowler, M. J., Conway, N. H.  
 Bowles, Mrs. E. A., Wyandotte, Mich.  
 Boyette, F., New York City.  
 Brabill, B. E., Fayetteville, Ark.  
 Brandell, Wm. H., Buffalo, N. Y.  
 Bretzmann, C. F., Indianapolis, Ind.  
 Brooks, A. J., LeRoy, N. Y.  
 Brown, Geo., Pittsburgh, Pa.  
 Brush Studio, St. Paul, Minn.  
 Bryee, I. N., White Plains, N. Y.  
 Bulletin of Photography, Philadelphia.  
 Bunker, Ada, Butler, Ind.  
 Burkhart, Clay, Saymour, Mo.  
 Bushong, J. Chester, Worcester, Mass.  
 Butler, E. V., Republic, Mich.  
 Camera, The, Philadelphia.  
 Camp Art Co., Buffalo, N. Y.  
 Cargill, C. E., Johnson City, Tenn.  
 Cash, New York City.  
 Chamberlain, B. H., Buffalo, N. Y.  
 Clark, Mrs. Anna Harris, Pittsburgh, Pa.  
 Clark, Frank Scott, Detroit, Mich.  
 Core, E. B., Yonkers, N. Y.  
 Core, W. F., Ft. Thomas, Ky.  
 Crovery, M. M., Reector, Ark.  
 Damsteegt, A., Brandon, Wis.  
 Diehl, A. H., Sewickley, Pa.  
 Doleman, B. O., Buffalo, N. Y.  
 Donnel Studio, Eureka, Cal.  
 Donnelly Studio, New Haven, Conn.  
 Donner, L. W., Green Bay, Wis.  
 Douglas, William, Snohomish, Wash.  
 Dozer, L. A., Bucyrus, O.  
 Durst Bros., Deer Park, Wash.  
 Eddowes Co., New York City.  
 Eddy, E. C., Southern Pines, N. C.  
 Edmondson, Geo. M., Cleveland, O.  
 Everitt, E. F., Redlands, Cal.  
 Falk, B. J., New York City.  
 Farber & Son, J. S. S., Norfolk, Va.  
 Feldman, Fred J., El Paso, Tex.  
 Free, E. A., Davenport, Ia.  
 Frey, Carl K., Utica, N. Y.  
 Fritsch, H. F., Owatonna, Minn.  
 Frost, Fred J., Toledo, O.  
 Genelli Studio, Sioux City, Ia.  
 Gessford, J. G., New York City.  
 Ginther, J. J., Buffalo, N. Y.  
 Goebel, R., St. Charles, Mo.  
 Goerz, C. P., American Optical Co., New York.  
 Golling, B. C., St. Paul, Minn.  
 Gowdy, Georgie O., New Berne, N. C.  
 Guttenstein, B. C., Milwaukee, Wis.  
 Haas & Haas, St. Louis, Mo.  
 Hale, J. E., Geneva, N. Y.  
 Hall Studio, New York City.  
 Hamley, A. F., Maquoketa, Ia.  
 Hammer, Fred, Hammer Dry Plate Co.  
 Hansen, Olaf, Iron River, Wis.  
 Hare, Geo. T., Buffalo, N. Y.  
 Harden, Homer T., Wichita, Kas.  
 \*Harris, G. W., Washington, D. C.  
 Harwood, E. H., Appleton, Wis.  
 Hayes, J. W., St. Louis, Mo.  
 Haynes, T. J., St. Paul, Minn.  
 Henry, O. C., Pittsburgh, Pa.  
 Holladay Studio, Durham, N. C.  
 Hopland, A. N., Clarkfield, Minn.  
 Hoyt, Dudley, New York City.  
 Hubert, Celia A., Buffalo, N. Y.  
 Imes, Lewis E., Lansing, Mich.  
 Immke, H. W., Princeton, Ill.  
 Isaacs, Isaac, Eau Claire, Wis.  
 Jamieson, Katherine, Pittsburgh, Pa.  
 \*Johnson, Belle, Monroe City, Mo.  
 Johns, A. R., Paris, Ky.  
 Kaiser, A., Dinuba, Cal.  
 Kakkonen, C. A., Hancock, Mich.  
 Kazaiyan Studio, New York City.  
 Kikuchi Studio, New York City.  
 Kikuchi, Toyo, New York City.  
 Knaff & Brakebill, Knoxville, Tenn.  
 Koehne, W. L., Chicago, Ill.  
 Kramer, George, Buffalo, N. Y.  
 LaMarche, B., Racine, Wis.  
 Leavitt, Rene, Chaleo, Neb.  
 Lee, W. M., Oeonto, Wis.  
 Leet, Frank F., Jamestown, N. Y.  
 Lewis, C. L., Toledo, O.  
 Lively, W. S., McMinnville, Tenn.  
 Loeb, S. S., Pittsburgh, Pa.  
 Lutes, F. S., Ft. Scott, Kas.  
 \*MacDonald, Pirie, New York City.  
 Mallory, R. L., Bellefonte, Pa.  
 Mandeville, W. G., Lowville, N. Y.  
 Mahn, Frank C., Clintonville, Wis.  
 Maresh, J. J., Caldwell, Tex.  
 Martin, E. M., Logan, O.  
 Markel, Irving, Buffalo, N. Y.  
 Mason, Geo. E., Buffalo, N. Y.  
 Maugans, A., DeGraff, O.  
 Maurer, J. M., Galveston, Tex.  
 Medlar, Frank W., Spencer, Ia.  
 Medlar, Herbert B., Woodstock, Ill.  
 Miller, Emmett L., Chappaqua, N. Y.  
 Moek, J. E., Rochester, N. Y.  
 Montgomery, H., Hartford, Wis.  
 Murphy, Will R., Newton, Kas.  
 Mullett Bros., Kansas City, Mo.  
 Munger, Dan C., Oconomowoc, Wis.

Newcomb Studio, Middlefield, O.  
 Nickee, Mrs. E. H., Pittsburgh, Pa.  
 Noble, F. S., Eastman Kodak Co.  
 Nuckles, W. A., Paris, Ill.  
 Nussbaumer, J. G., Buffalo, N. Y.  
 O'Brien, D. D., Waukesha, Wis.  
 Olszruski, Leon, Buffalo, N. Y.  
 Orso, F. J., Gillespie, Ill.  
 Pach Bros., New York City.  
 Pancoast, Chas. R., Philadelphia.  
 Phillips, Ryland W., Philadelphia.  
 PHOTO-ERA, Boston, Mass.  
 Photo Art Shop, St. Paul, Minn.  
 \*Photographic Journal of America, New York.  
 Pictorial News, New York City.  
 Pierce, H. H., Boston, Mass.  
 Plecker & Maury, Lynchburg, Va.  
 Pohle, Frederick W., Buffalo, N. Y.  
 Poisson, E. J., Biddeford, Me.  
 Popular Photography, Boston, Mass.  
 Post, F. E., Denver, Colo.  
 Prince, L. M., Cincinnati, O.  
 Price, Sara F. T., Mt. Airy, Philadelphia.  
 Pryor, W. A., La Crosse, Wis.  
 Ragsdale Studio, San Angelo, Tex.  
 Reese, B. F., Morristown, Tenn.  
 Reineke, Miss, Kansas City, Mo.  
 Richards, A. J., Medina, N. Y.  
 Robinson, Miss Dona, Heavener, Okla.  
 Rockwood, Jr., New York City.  
 Rosch, A. T., New Rochelle, N. Y.  
 Rosch, J. Edw., St. Louis, Mo.  
 Rosch, M. B., White Plains, N. Y.  
 Rose, H. B., Live Oak, Fla.  
 Schaefer, H. B., Altoona, Pa.  
 Scheide, C. W., Elyria, O.  
 Schiller & Co., W., St. Louis, Mo.  
 Schlang, F., Ft. Wayne, Ind.  
 Schlueter, Frank J., Houston, Tex.  
 Schriever, J. B., Seranton, Pa.  
 Schroeder, Romeo, Baraboo, Wis.  
 Scott, B. S., Pittsburgh, Pa.  
 Sedden, R. C., Pittsburgh.  
 Selby, Misses, New York City.  
 Sipprell, F. J., Buffalo, N. Y.  
 Smith, Chas. O., Buffalo, N. Y.  
 Smith, Geo. D., Oak Harbor, O.  
 Smith Portrait Co., Philadelphia.  
 Spencer, Mrs. A., Beatty, N. Y.  
 Spieth, Otto, Jacksonville, Fla.  
 Stage, J. H., Buffalo, N. Y.  
 Stein, S. L., Milwaukee, Wis.  
 Stierle Bros., Marshfield, Wis.  
 Stoltz, C. H. H., St. Paul, Minn.  
 Stone, W. D., Tahlequah, Okla.  
 \*Strauss, J. C., St. Louis, Mo.  
 Strauss-Peyton Studio, Kansas City, Mo.  
 Tamlyn, G. W., Mason, Mich.  
 Thayer, E. Q., Noblesville, Ind.  
 Thompson, D. P., Kansas City, Mo.  
 Thuss, A. J., Nashville, Tenn.  
 Tomlinson Studio, Hannibal, Mo.  
 Titus & Burnell, Buffalo, N. Y.  
 Tobias, J. H., Lancaster, O.  
 Toloff, Jos. D., Evanston, Ill.  
 Toloff, Lester, Pittsburgh, Pa.  
 Topliff, Geo., Anasco Co.  
 Tonndorf, Carl, Milwaukee, Wis.  
 Towles, W. H., Washington, D. C.  
 Townsend, Alva C., Lincoln, Neb.  
 Turk, Mrs. Otto, Jamestown, N. Dak.  
 Underhill, Irving, New York City.

Underwood & Underwood, New York City.  
 Van Buren, C. B., Ithaca, N. Y.  
 Van Fleet, Margaret, Detroit, Mich.  
 Yachett Studio, St. Mary's, O.  
 Walinger, Chas., Chicago, Ill.  
 Wardner, N. S., Plainfield, N. J.  
 Watkins, E. M., Chicago, Ill.  
 Watton, H. C., Oklahoma City, Okla.  
 Weeks, Lucia, Mansfield, O.  
 Weigel, Miss Mary, Dyerville, Ia.  
 Westberg, L. E., Duluth, Minn.  
 Wiegand, Daniel F., Eden, Erie Co., N. Y.  
 Wint, R. W., Allentown, Pa.  
 Young, Sol., New York City.  
 Zahner, M. H., Niagara Falls, N. Y.  
 Zimmerman, Chas., Buffalo, N. Y.  
 Zimmerman & Lelende, St. Paul, Minn.

### The National Portfolio

To acquaint the Nation with the beauty and extent of its national parks, Secretary Lane, of the Department of the Interior, has caused to be issued a portfolio of nine pamphlets, each devoted to a presentation and description of the picturesque scenery of a national park. The illustrations, superbly executed halftones, are from original photographs by the best craftsmen in the country, viz., J. E. Haynes, Edward S. Curtis, George R. King, Herbert L. Gleason, Fred H. Kiser, H. C. Tibbitts, J. T. Boyesen, A. C. Pillsbury, Lindley Eddy, W. L. Huber, H. T. Cowling, Enos A. Mills, John K. Sherman, Arthur Chapman, J. L. Nussbaum, Curtis & Miller, Fred Harvey and S. N. Leek.

That the United States government furnishes to the people playgrounds which are without any rivals in the world; that just as the cities are seeing the wisdom and necessity to provide open spaces for the children, so with a very large view the Nation has been saving from its domain the rarest places of grandeur and beauty for the enjoyment of the world, is a fact that has been discovered by tourists only this year. Having an incentive in the expositions on the Pacific coast, and Europe being closed, thousands have for the first time crossed the continent and seen one or more of the national parks. That such mountains and glaciers, lakes and canyons, forests and waterfalls, were to be found in this country, was a revelation to many who had heard but had not believed. It would appear from the experience of the past year that the real awakening as to the value of these parks has been realized at last, and that those who have hitherto found themselves enticed by the beauty of the Alps and the Rhine may find equal if not more stimulating satisfaction in the mountains, rivers and valleys which this government has set apart for them and for all others. The nine profusely illustrated pamphlets are devoted to the following subjects:

Yellowstone National Park	31 views
Yosemite National Park	28 views
Sequoia National Park	27 views
Mount Rainier National Park	24 views
Crater Lake National Park	23 views
Mesa Verde National Park	27 views
Glacier National Park	25 views
Rocky Mountain National Park	29 views
Grand Canyon National Monument	24 views

### Cause Enough

*Camerist, to his companion* — "I noticed that your friend, Miss Perkins, whom we just passed, gave you the frozen face. Have you offended her in any way?"  
 "No, indeed! I only made a picture of her."



## LONDON LETTER

ONE of the most interesting photographic exhibitions ever held in London is that of the Official Records of the Photographic Section of the French Army. It is being held at the Royal Georgian Galleries at Messrs. Waring and Gillow's, Oxford Street. There are over five hundred photographs on view, mostly bromide enlargements. They are grouped under such headings as "Verdun," "The Somme," "In Belgium," etc.; but alas! the catalog was not compiled at the same time when the pictures were hung, and it causes some maddening dodging about. It is interesting reading, however, and has some lengthy descriptions at the beginning, though it grows very laconic towards the end. It is very communicative on the first page, and No. 6 is a good example. We read "Garden in the Department of the Oise: Artillery Encampment. The ease with which the men of France, little practised in sports and open-air life, have adapted themselves to the long marches and exposure, should be every one's admiration. Without preliminary training other than their military service, often many years behind them, they show more staying-power than any of their allies or enemies." None but the French could have done the photographs, nor any one but a Frenchman have written this pathetic little description.

Though many of these photographs are dramatic and vivid, they portray no horrors. We see a trench full of dead Germans; but it is not so gruesome as it sounds, and a wounded man from the Verdun fight being carried to a dressing-station is only a pitiful sight.

We are not shown so much the ghastliness of war as the effort France is making. Ruin and devastation on the one side, and on the other the work of reconstructing, organizing and healing. Naturally, the fighting-pictures are the most interesting, but it is certainly impressive to see the ammunition-making, the steel-foundries at St. Etienne, the French headquarters, military steel-foundries working at "120" shells, etc.

The most tragic and the most beautiful were the color-plates — taken, evidently, by some one with an imagination and a love of beauty. They are mostly gems of architecture, now in ruins, and the photographer's delicate rendering of these scenes made one inclined to weep. The catalog contents itself, here, with extreme brevity. For instance, "Vienne-le-Château — The Ruins;" "Arras — The Cathedral," and "Fey-en-Haye — Church" are deemed sufficient, for it is wise enough to know that the color-plates are making an appeal straight to our hearts. It is only fortunate for us that the other prints are not in color, or we could not have born such realism when it is to do with humanity instead of architecture.

We have just come from the Little Gallery in Long Acre, and feel that we have enjoyed some much-needed foreign travel. The exhibition is one of Colonial work, and there is not an English-looking print in the show. We are all getting very tired of staying at home, especially in August, and it was a refreshing thing to get these glimpses of other lands. The whole atmosphere is different: Mr. Cazeneuve's "Spring-Time" could only be spring-time in South Wales, and Mr. Gilham's "Giant Gums" are typically Australian. "By the Jungle-Pool" we are in the heart of Africa, and then we are whirled off to China to see "The Feast of Lanterns." This is a curious effect, as the lanterns are a dense white, cutting, as it were, right into the print, and the contrast of this flash of light against the rest of the picture, which is low in tone, is startlingly bizarre. This

does not surprise us, because we are having a foreign change, when any deviation from the normal is welcome! In "The Stock Route" we are back again in Australia, and see an immense flock of sheep being driven along a dusty road. From this blinding and glaring scene we are spirited off to the quiet and restful "Garden of Allah," a stately Indian Temple by Mr. Gascoigne Lynde, of Madras. We are shown little, dark-skinned children, a Zulu boy with a head-dress of horns, a Boer girl with a gun and a still-life of fruit, but even that is strange, for over here we know nothing of "Loquats," and that is what Mr. E. N. Poole, of New South Wales, calls his picture.

The photography of medals, almost an art in itself, will soon have to be taken in hand by British photographers, for there is no doubt that the end of the war will see a great variety of numismatic memorials. Already, the Civic Arts Association has an exhibition at the Royal Institute of British Architects (No. 9 Conduit Street). This is not a show of finished work; but rather a summary of the poems in stone or metal that are to be. There is no doubt that the exhibition will stimulate designers. If it does this, one of its chief objects will be attained. An anonymous collector has presented to the British Museum some specimens of the medals which have been struck in Germany to commemorate the war. These are not to be shown to the public at present, although there are plaster-casts of thirteen of them on view at the Victoria and Albert Museum, South Kensington. They throw a curious light on the attitude of mind of the German public, not to mention the German artists. The medal commemorating the sinking of the *Lusitania*, which is amongst the replicas, at South Kensington, is a well-nigh incredible production in spirit. But we are straying from photography, and need only remark that all these works of art will have to be carefully photographed and circulated all over this country, if only to impress on the people our enemy's attitude of mind.

Photography looms larger than ever this month in relation to the war. Even the British Cabinet Ministers are to be kinematographed! Such an event would have been unbelievable even a year ago; but war is the destroyer not only of armies but of conventions. Never was there a stronger tradition than the secrecy of the doings of the Cabinet. Even their methods of conducting business have been jealously guarded. Now a long-table conference is to be disclosed to the public gaze, and by means of the "movies." When the film is completed, it will be sent to every theater in the country and, eventually, all over the world. History-making and charity, which will benefit largely by the scheme, are the chief causes that have made this revolution possible, and there is no doubt that some such record of the cabinet of the war-period will possess permanent historical interest and value.

We are beginning to hear tales of the adventures of the men who are taking motion-pictures actually at the front. For several months one man has been portraying the struggle in Belgium, at Ypres and Neuve Chapelle. One of the "trophies" brought back was his service-cap, with two German bullet-holes through it; and a tripod that had been smashed by shrapnel was made to continue its work with the aid of some stout string. When, as Sir Douglas Haig's dispatch announced, "We attacked at dawn," this operator was a few yards behind the troops standing with fixed bayonets ready for the word to advance, and secured a picture of the leap from the trenches that will be ever-memorable.

Besides the kinematograph-work, the news by photographic pictures from the front has lately been much

improved. Censors and all officials seem to have become more lenient both to the press and the photographers, and we get much better information. The Royal Engineers devote a good deal of time to photography, obviously for military purposes. But some of the results that do not disclose professional secrets have been allowed publication. Mr. Brooks, who was with the troops at Gallipoli, is now official British photographer at the front in France. Of course, all photographs have to pass the censor before they can be given to the world; but they score over despatches, which are killed by the official blue pencil, being generally of momentary interest only; whereas the temporarily suppressed pictures may, and probably will, come to life again when the war is over.

### A Photo-Era Reference Library

UNDER this designation we refer to the list of selected issues of PHOTO-ERA, published during the last eight years, and which list, under the various subject-headings, was printed in PHOTO-ERA for June, July, August and October, and will be concluded in the November issue, 1916.

The important articles contained in these back numbers are prized, particularly, by new readers of PHOTO-ERA, who have no back files and cannot conveniently consult them at their public libraries. Timely articles on almost any practical subject in photography may be found in these back numbers, which are offered at 25 cents each, postpaid, so long as the supply lasts.

Some of our friends look upon this reference library as a veritable encyclopedia, and we are glad to state that amateurs, generally, are availing themselves of this opportunity to obtain valuable and trustworthy information on almost any photographic topic likely to come up now or in the future. This interest is likely to continue for a long time to come; and workers who have not yet needed advice on some special subject will find it to their advantage to preserve the numbers of PHOTO-ERA beginning with June, 1916, which lists these important articles, together with the names of the authors and the dates of their publication.

### Brooklyn Institute of Arts and Sciences

RECOGNIZING the broadening influences of artistic photography in portraiture, magazine-illustration and as a medium of art-expression, the Department of Photography announces a special autumn- and winter-course. It is open to beginners as well as advanced workers, and will consist of twelve sessions, the first four of which will be given by Karl Struss on October 5 and 19 and November 2 and 16. The second four sessions will be given by Paul Lewis Anderson in December and January, and the last four by Clarence H. White in February and March, on alternate Thursday evenings. The price for members of the Institute is \$10, and for all other persons \$14. Write for prospectus, giving full particulars, to the Brooklyn Institute of Arts and Sciences, Academy of Music, Brooklyn, N. Y.

The Department also announces that it has again secured the services of Mr. William H. Zerbe to conduct a course in photography, beginning October 3, with a class for beginners and another for advanced workers. Students who have taken the course in previous years are enthusiastic over Mr. Zerbe's painstaking methods of instruction. A prospectus giving full particulars may be had upon application.

### Misunderstanding

"My father uses a tripod when he photographs."

"Has he a Kodak?"

"No; the palsy."—*Fliegende Blätter*.



## BOOK-REVIEWS

*Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices. Send for our list of approved books.*

THE GRAPHIC ARTS AND CRAFTS YEAR-BOOK, 1913-14, Volume VI. American Annual Reviews of the Printing and Allied Industries. Walter L. Tobey, editor. Quarto, 1,022 pages; cloth-bound with leather back. Sumptuously illustrated. Price, \$5.00, express paid. Hamilton, Ohio: Graphic Arts Press.

This, the only American annual devoted to a survey of the process and printing-trades, is ever welcome, and never fails to elicit unstinted admiration. Its many specimens of the most advanced styles of illustration in monochrome and color, of the newest type-faces and typographical schemes and the many contributed technical and review articles by our foremost authorities speak eloquently of the expert knowledge and discriminating taste of the editor, Mr. Walter L. Tobey. Every craftsman in every branch of the printing and allied trades will be benefited by perusal and study of this bulky volume; likewise the commercial photographer who prepares prints for engraver's use.

The ten sections comprising the complete volume have been edited and compiled by as many men, each an authority in his respective line, and include Walter L. Tobey, A. H. McQuilkin, Henry Lewis Johnson, Marquis Regan, Edward Epstein, A. V. FitzGerald, W. S. Carroll, Charles D. Jacobs, E. Woodman Palmer and Edward Passano. In most of these departments will be found signed articles by leading printers and engravers devoted to art and technical matters which will prove of the utmost practical value to others similarly engaged. The illustrations represent the work of many establishments and the presswork from fully as many print-shops. In each instance full credit is given, with an appended statement of the paper, inks and types used. Virtually every sort of reproduction and mode of printing is represented.

### California Camera Club

THIS club will hold its Fifth Annual Photographic Salon, the first since the great fire of 1906, in the galleries of the Palace Hotel, San Francisco, November 25 to December 2, inclusive. It is the aim of the Salon to exhibit only such pictures as measure up to the highest standards of artistic expression and show mastery in execution. All work submitted to the jury of selection, composed of leading artists, will be judged according to these standards. All correspondence should be addressed to the Secretary, California Camera Club, 833 Market Street, San Francisco, of whom full particulars and entry forms may be obtained.

Prints must be mounted but not framed. The maximum size for mounts is 20 x 25 inches. All pictures, accompanied by an entry-form properly filled out, together with an entry and packing-fee of seventy-five cents, must be sent by parcel-post or express prepaid, to arrive before November 4. Arrangements will be made for the sale of pictures, and a commission of fifteen percent will be charged on all sales. Each print must bear on the back the name and address of the artist, the number and title of the picture and the price.





# WITH THE TRADE



## A New Edison Developer

ALTHOUGH the announcement of this newest substitute for Metol reached us too late to test the salt itself, we have no hesitancy in recommending anything bearing the name of Edison, knowing that his reputation is too valuable an asset to be endangered by association with inferior products. The same is true of the firm-name, G. Gennert, which alone would be sufficient guaranty of the merit of Paramidophenol Hydrochloric-Edison. This new agent has the advantage of requiring no special formula, it being substituted for Metol in any favorite formula with gratifying results.

## The Home of the Imp Flashlite Gun

WITHOUT doing a penny's worth of war-business the plant of the Imperial Brass Manufacturing Co., Chicago, manufacturers of the Imp Flashlite Gun and other brass-specialties, has been running night and day for many months past. A new building is now to be erected on an adjoining site, which will double the present floor-space and give a total of 150,000 square feet. The growth of this firm is the direct result of the high quality of its products, and PHOTO-ERA readers will make no mistake in placing implicit confidence in them. The Imp Gun costs only \$1.75 complete, and a circular will be sent gladly upon application.

## Diamidophenol for Gaslight Papers

BREWSTER & ROBBINS, manufacturers of Diamidophenol in America, recommend the following formula for pure black and white tones on gaslight papers.

### STOCK-SOLUTION

Water .....	16 ounces
Sodium bisulphite .....	192 grains
Sodium sulphite, anhydrous .....	2 ounces

### DEVELOPER

Stock-Solution .....	2 ounces
Water to .....	10 ounces
Diamidophenol .....	25 grains
Potassium bromide, sat. sol. ....	3 drops

## A Moral from King Cyrus

MANY years ago, the great city of Babylon was attacked by a live wire known as Cyrus, King of Persia. The Prince of Babylon retired behind the great walls of his city and thought he was perfectly safe for some days to come.

The city was built on both sides of the Tigris River, which flowed under a great arch in the walls and through the heart of the city. The mighty river had always been as great a protection as the walls themselves.

Such a condition would have worried most men, and they would have been content to sit down with their army and wait for the city to starve. But not so with Cyrus. He was progressive.

So Cyrus took most of his army up the river out of sight and set them to digging great trenches out in the desert and leading toward the city. Most of the generals thought he was crazy. But Cyrus stood ace high and they had to obey him.

About the time they had brought the great ditches nearly up to the river, Cyrus heard that there was to be a great feast in Babylon in the palace of old Belshazzar. It was a wonderful banquet. All the leaders of the army were there, and reports have it that most of them were somewhat under the weather, as it were. Everybody forgot that Cyrus was outside the city with an army of Persians.

At the height of the feast, Cyrus caused the great ditches to be opened into the river, and the water flowed out into the desert instead of through the city of Babylon. Cyrus and his army marched into the city over the ground where the river had flowed before. Thus fell Babylon.

There is a moral in this incident for the businessmen of to-day. The merchant or manufacturer who fails to take advantage of new and improved methods, and insists that his father's methods are good enough for him, is like the people of Babylon, and must eventually give way to the live wire who follows the example of Cyrus and breaks away from the beaten path.

Many modern business-men, when asked why they don't advertise, reply: "Oh, I don't have to advertise. My father never advertised, and look at the big business he built up."

The deplorable fact about nine out of ten such men is that their business, prosperous though it may be, is standing on the edge of failure. It may never fall over the edge, to be sure; but the risk is hardly worth the candle. Far better and far safer for them to fall in line with progress, and, with the force of advertising, ensure their business permanently against all invasion.

*Critique.*

## Cramer Plates and Filters

JUST as the manufacturer of every plate and film knows what developer is best suited to bring out its excellences to the full, so he knows best how deep and what color to make the filter for orthochromatic work so necessary to the correct rendering of autumn-landscapes. Cramer plates and filters have been carefully adjusted in the Cramer Research Laboratory under the direction of R. James Wallace, and the average worker does well to use them jointly.

## Wellington Anti-Screen Plates

THIS justly popular brand of plates has become a fixture on the American market, for its worth has been proved in actual practice. Those workers who wish to avoid the trouble and extra exposure entailed by the use of a color-filter in autumn-photography will be glad to know that despite the war Ralph Harris & Co., the American agent, has a goodly stock of Anti-Screen plates and can take care of all reasonable orders.

## Haldorson Home-Portrait Flashlamp

Now that shorter days are bringing artificial light more frequently into use, home-portrait workers who desire a particularly compact and efficient lamp suitable for single figures or groups up to twenty persons will welcome the Haldorson outfit described in an advertisement on another page. It seems to meet a need not filled by any other device on the market.

NOVEMBER

1916

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# PHOTO-ERA

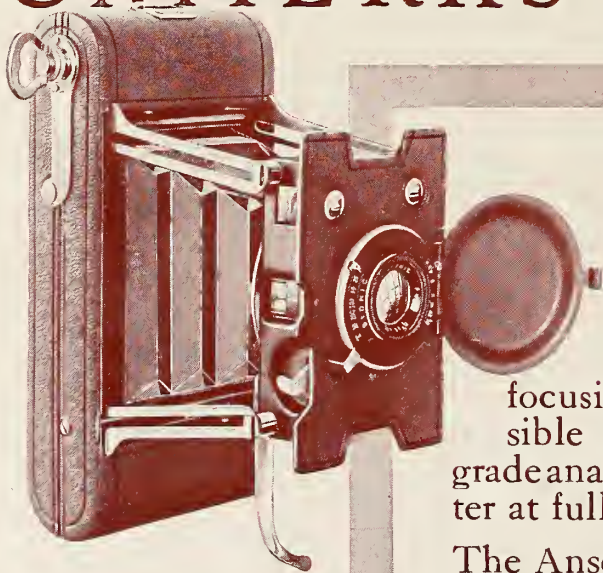
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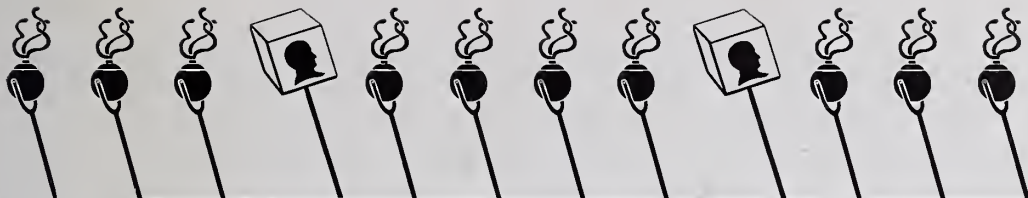
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### Binghamton, New York



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“THE WHITE MOON CLIMBS THE SKY”  
WILLIAM S. DAVIS



# PHOTO-ERA

The American Journal of Photography

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NOVEMBER, 1916

No. 5

## The Possibilities of Our Neighborhood

WILLIAM S. DAVIS

**N**OVELTY attracts attention; "familiarity breeds contempt." In brief, this no doubt accounts to a great extent for the average amateur's desire to wander farther and farther in the search of attractive subjects while overlooking those nearer home; for it is a fact that too close acquaintance with our surroundings, even though it may not amount to contempt, produces an indifferent attitude toward them, with the result that we are apt not to be on the alert to discover fresh possibilities. However, one need only to stop a moment to realize that the material which lies near at hand is just as fresh and novel to others as that which we seek afar is to us, and in about nine cases out of ten the chances are that there is little or nothing to choose in relative value, so far as pictorial possibilities are concerned.

To start right, the beginner who hopes to produce pictorial work must realize that the merit of the finished picture is not dependent upon the imposing quality or other intrinsic value of the subject-matter selected, but upon the manner in which the chosen material is used by the artist. Many of the world's greatest masterpieces are based upon the simplest elements, interpreted through the brilliant personal vis-

ion of those who produced them. Corot found inspiration for many of his greatest landscape-dreams around the little lake at Ville d'Avray; Millet passed his message along in some cases from his very door-step, a peasant cottage in Barbizon — which little village, by the way, would never have become known to the world but for the group of painters who settled there near the middle of the nineteenth century.

Setting aside any story-telling element — which may or may not be present, but in any case is separate from the pictorial — the merit of a composition depends upon the abstract beauty produced by the skilful juxtaposition of various tone-units formed by the play of light and local color of the objects used, together with the line-arrangement brought about by their disposition, and such latent beauty as may be extracted from commonplace things as well — and sometimes better — as when one is attempting to cope with some renowned scenic marvel. Of course, many persons enjoy one class of subjects more than another, and they have a good right to follow their inclinations; but such choice is a matter of personal taste.

As my readers may think it time to ask just what this preamble has to do with neighborhood-possibilities, let me explain that I



THE RAINBOW

WILLIAM S. DAVIS



want them to take a sufficiently detached view regarding the material in their vicinity to think of it in terms of light and shadow and varied shapes with which interesting designs may be created, instead of regarding it simply as an aggregation of "things," known as "houses," "trees," etc. By thus acquiring a fresh mental angle of vision, so to speak, one unconsciously forms the habit of analyzing everyday surroundings from the pictorial standpoint, and, in consequence, new opportunities will constantly be revealed in most unexpected ways. Perhaps, though, the first thing brought forcibly to mind by this broader vision is the fact that subjects formerly regarded as fixed in form are astonishingly altered in their outward aspect by seemingly slight changes in the state of the atmosphere or time of day, with the result that some commonplace bit, which had been passed at least a hundred times as devoid of interest, may the hundred-and-first time give one all the needful elements to make a prize-winning picture. Another point I would also lay particular emphasis upon is the fact that the desirable material, oftener than not, is surrounded by extraneous matter, which makes it necessary to regard a scene in sections rather than as a whole.

As these transformations are produced in such varied ways, it is impossible for one always to judge the possibilities of a given subject in advance; but this only adds a certain sporting-element to the picture-making game, and stimulates interest by keeping one always on the look-



THE MOONLIT ROAD

WILLIAM S. DAVIS

out for passing effects. And even should the magic box not be at hand at the psychological moment, one still has the personal pleasure of discovering beauty in an unexpected manner.

By way of suggesting more definitely the possibilities of our neighborhood, I have selected the accompanying photographs as representative of a large number that illustrate my own experience. By way of explanation, I should say that my studio is situated upon a quiet street on the edge of a small Long Island village. The road starts at the harbor, a few doors below, and runs in an easterly direction. On each side are frame-houses, those that are common in all our villages in this section of the country, with lawns of goodly size surrounding



OCTOBER-MISTS

WILLIAM S. DAVIS

them. Back of the lawn upon which the studio is located is a garden, and back of this, and extending all along the line of house-lots on this side of the street, are open and tilled fields. Add a fair assortment of fruit- and shade-trees along the street and upon private property,

which could be included in the term "neighborhood."

In looking at these examples, the reader will see that variety was obtained by making the exposures under widely varying conditions, both as to time of year and day, and atmospheric conditions. Also, in every instance the theme is dependent upon some passing phase of nature.

With reference to their location: "The Moonlit Road" shows the street from a standpoint one door below the studio on a February evening shortly after moonrise. Another taken the same evening, but a little further up the road, appeared in the February, 1913, issue of PHOTO-ERA under the title of "Winter-Evening." Others, published more recently, show the same material in a different way, viz., "A Foggy Vista," April, 1914; "When the Snow Lies Deep," January,



WIND-SWEPT

WILLIAM S. DAVIS

and I think that the general topographical description is reasonably complete.

Just how many paintings and photographs I have made from this material, it would be difficult to determine; but I know of at least eighteen photographic studies, taken within a few hundred feet of the studio, which PHOTO-ERA has published, to say nothing of many sent elsewhere, and others still unpublished. Those that accompany these notes are typical in character, and were made from standpoints less than two hundred feet in any direction from my studio, which is surely coming well within the distance



THE SILVER CRESCENT

WILLIAM S. DAVIS



1915; "When Drifting Snows Lie on the Road," March, 1916; "Afternoon Shadows," May, 1916. "The White Moon Climbs the Sky" was made one August night without leaving the yard, the branches of an old apple-tree on the premises silhouetted against the evening-sky proving too attractive in combination with the moon to resist. Our next subject, "The Rainbow," is merely an example of catching a fleeting effect. The bow appeared near the end of a hard shower on a May afternoon, so I hastily planted camera and tripod on the lawn, pointed garden-ward and made the exposure while a light rain was still falling. The landscape-material was not so carefully utilized as it might have been; but my excuse for this is the fact that I had never obtained a photograph of a rainbow before, hence I was eager to make an exposure before it faded away. As "October Mists" tells its own story, I need only add that it, too, was obtained without leaving the premises, the two stacks being reminders of the green-corn crop of the above-mentioned garden, back of the lawn. "Wind-Swept" shows the open fields, previously referred to, when the late autumn-gales sweep over the bare earth with nothing to break their force. Of course, it is

quite evident that the bit of landscape, here shown, would not stand alone on its merits; but it serves the purpose of completing the cloud-composition in an harmonious manner by suggesting bleak, open spaces, and, not being of particular interest in itself, allows the eye to go directly to the clouds. "Wrapped in Winter's Blanket" and "The Silver Crescent" are two views of a neighbor's house. The first is a rear view on a gray winter-morning, and the last was taken from the opposite side in autumn at twilight. "After the Snow-Fairies' Visit" is a scene photographed in the same neighbor's back yard while all the trees were thickly laden with soft newly-fallen snow.

Some readers who have taken the trouble to follow me so far will undoubtedly say: "These subjects are not to be found in my neighborhood," and that may be true, of course; but on the other hand, dear reader, you undoubtedly have various classes of subjects which I cannot find nearby, so it is for you to discover the possibilities which must lie there and to make the most of them, and I am sure that by combining active searching with patient waiting you will be duly rewarded.

## What Is a Good Picture?

BIRGE HARRISON



IT is the personality which makes the art. Nature, however beautiful, is not art. Art is natural beauty interpreted through human temperament.

Here, then, we have at least one infallible test, which can be applied to any work under discussion—that it shall be clearly and strongly stamped with the personality of its maker, so that we may know without asking that a drawing is by Hokusai, or a painting by Velasquez, Whistler or Winslow Homer. An originality thus expressed is only another word for sincerity. Sincerity used in this sense, however, is far from meaning a slavish or mechanical copy of nature. The highest form of sincerity is truth to the artist's own personal vision of beauty.

All true art is the direct result of analysis and synthesis on the part of the artist—whether instinctive, or accomplished with a clear conception of the work to be done. Having analyzed nature's suggestive motive, the artist is at liberty in the synthetic building up of his work to use as many or as few of the elements as his personal sense of beauty tells him will be necessary to the work in hand. He can employ the whole scale,

or he can reduce his choice to the few conventional symbols used in a beautiful Persian rug; the only imperative law being that he shall go direct to nature for his inspiration; the inevitable penalty of failure in this respect being the limbo of the imitator—the loss of all freshness, spontaneity and personality. With this one restriction the artist's latitude is practically unlimited, for in a general sense art is any object made by a man which is conceded by his fellow-man to be beautiful.

In regard to the picture, it is difficult to foresee at present just how far the average cultivated person will follow the artist into the region of pure symbolism; how few the elements he will demand, and how much his own imagination will supply; also what direction this development will take. \* \* \* It is quite certain that no abnormality masquerading under the name of the "art of the future" will win a permanent place in the regard of humanity. The beauty which is to endure must be sane and wholesome, because the human race is sound at heart, and can be counted upon in the long run to reject anything which is essentially unhealthy or decadent. — *Landscape-Painting.*



WRAPPED IN WINTER'S BLANKET  
AFTER THE SNOW-FAIRIES' VISIT  
WILLIAM S. DAVIS





# Enlarged Negatives

JAMES THOMSON



HAVING occasion in the latter part of 1915 to make some enlarged negatives, the, to me, unexpected advance in the price of plates made me pause. In this exigency it came to me that many another worker — among the number being the late Walter Zimmerman — had found in bromide paper an adequate substitute for the glass, the one fault in a few cases being an inability to get sufficient opacity in the highest lights.

Being thoroughly conversant with the process of making enlargements upon gaslight paper, and knowing the capacity of the hard grades to furnish the deepest of blacks, I decided to make the venture with Noko paper, employing, when necessity impelled, the contrast grade, and of brilliant gloss as to surface-texture. Earlier experience had convinced me that for making negatives the glossy surface had many points of superiority over others.

Now Noko is an inexpensive paper, but as it is made by the Anseo people I have the greatest confidence in its high quality. Not quite so good a stock, doubtless, as Cyko, the average amateur, nevertheless, to whom it is unfamiliar as a printing-medium, need not hesitate to adopt it with regard to common everyday results. It is a paper sold in rolls for use with the Cirkut Camera, a fact that gave me the greatest confidence in its suitability.

Of course, some sort of enlarging-apparatus is in order in making the enlarging-negative. Now, though I have enlarging-appliances of an adjustable kind, I have found, of late, in making 8 x 10 positives, that a camera of the fixed-focus kind is very handy. A box made from corrugated board, of the kind illustrated on the opposite page, has fitted to it an R. R. lens which has been retained from a discarded 4 x 5 camera. As in negative-making, rectilinearity is essential, and a single lens will not answer. Such a box as this is easy to make, simple to operate and, outside of the lens, costs next to nothing, as the material can be procured from cast-off boxes that have been used for packing-purposes.

A positive is needed. In quality it must not be dense or have excessive contrast. Make it thin, with the clearest portions not exactly clear glass, but with a trifle of deposit on them. Although a fine-grained plate is usually in order for making enlarged negatives, I do not deem such at all essential where paper is to form the ultimate

support. There is assuredly some loss of detail when we use paper in place of glass; but this sacrifice of detail is an advantage rather than a detriment when broad effects are sought.

Of course, making the positive is a job for the darkroom. After dusting the negative, place it in the printing-frame, and on top of it, film-side down, the sensitized plate. Next, cover with a sheet of black paper, and secure all by springing the back into place. The greatest care must be taken to avoid presence of dust between the glasses.

Stand about three feet from the illuminant — I use a candle 1 1/4" in diameter — expose for seven seconds. I have used for this purpose the Vulcan plate, developing with the regular M. Q. Vulcan-plate developer. Any other brand of plate, however, will answer.

To make the enlarged paper-negative, proceed as for any ordinary enlargement, the only difference being the substitution in the negative-carrier of a glass positive. The sensitive paper being in place on the exposure-board, test-strips should be used to determine strength of the light. This having been effected, a small stop, say F/32, should be arranged for and exposure made. In my own work I employ usually F/16.

October, 1915, working at an eastern window on a sunny day, the paper, Noko, of normal grade, and the stop F/16, an exposure of six minutes for the 8 x 10 dimension was found to be correct. Half a dozen different positives were thus run through, the exposure running from six to seven minutes. Contrast grade of paper required doubling the exposure.

Special pains must be taken in drying, to the end that the negatives be flat. Should the paper dry in an uneven manner, there is difficulty to keep all parts in close contact with the sensitized surface, which results in an unsharp image, for which the sagging portions are responsible.

Excellent, enlarged negatives are possible by exposing a sensitive plate under an ordinary bromide or chloride (gaslight) paper print. This enlarged positive should be on light-weight stock of a semi-matte or glossy surface. Any of the favorite brands at present on the market will give good results; but in order that as full a range of gradations as possible shall be obtained, the normal grades alone should be chosen. I know of not another development-paper on the market that gives a greater range of gradations than Artura Carbon Black.



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# Slander-Actions for Maligning Competitive Products

## A Word of Warning to the Over-Talkative

ELTON J. BUCKLEY



SAT in court the other day and heard a case tried which inspired a lesson that I resolved to teach, if I could, through one of these articles.

It is the lesson that a business man should at all times be careful and guarded in his statements regarding the products of another. A hundred thousand times a day statements are made by merchants and manufacturers about competitive products which are grossly slanderous, and if written, are libelous. Every man who makes such a statement is liable to heavy damages if the manufacturer whose product he has attacked hears of it and wishes to sue. Some of the heaviest verdicts on record have been given in cases like this.

Not only is the merchant and manufacturer himself responsible if he makes such statements about competitive goods, but he is usually liable if his employees do it.

The case which I heard tried was brought by the manufacturer of an automobile grease which is used mostly in the transmissions of cars, against an oil-man, who, though he sold no grease himself, was supposed to be interested in another concern that did. At least, that was the theory of the plaintiff. The defendant had circulated the report that the plaintiff's grease contained clay, and would injure gears. The result was that the demand fell off and the plaintiff's business fell to a small fraction of what it formerly was.

The defendant denied saying that the grease contained clay, but admitted saying that it "contained a clay-like substance," which, he contended, was true. The jury did not believe him and gave a verdict of \$5,000 against him. It may be that it is quite inconvenient for him to pay such a sum.

The worst of these cases is that the sympathy of the entire court is almost invariably with the plaintiff.

The other day a tire-dealer with whom I have some relations said to me: "The stuff the —— people are putting in their tires this year is awful. The tire is n't any good at all any more. The other day I sent one back on adjustment that really was n't any thicker than an inter-liner."

If this was true, it was not slanderous. It was probably not true, however, because he named a very well-known tire, and I cannot believe that any manufacturer who had spent money to make

his tire well-known would deliberately commit suicide.

Even if the statement was not true, the courts might not hold the dealer responsible in a slander action, if he said it sincerely, believing it to be true. But if it was not true, and was said for the sole purpose of affecting the sale of tires, then it is grossly slanderous, and if the particular manufacturer finds it out and goes after the dealer, he will find a real walk-over waiting for him. He can get damages just as surely as the sun sets in the West.

A few days before this, another tire-dealer — this talk seems to be running into the automobile-field, although, of course, the law is the same regardless of the product — told me precisely the same thing regarding another tire, equally well known and even better respected than the first one. He added that it would not give anything like the mileage which it formerly gave.

What I have said about the first statement applies equally to the second.

A month or two ago a third tire-dealer, in order to persuade me not to buy a certain cord-tire, told me of difficulties which he said existed as to repairing this tire if it punctured or blew out. I subsequently learned that his statements were untrue, and I have no doubt that he had it in for this particular make of tire and used this method to kill sales. It was very effective with me, at least so far as that particular purchase was concerned, and doubtless would be with others. If that dealer knew he was telling an untruth, and his only motive was to kill sales, he would have no defense whatever to an action by the manufacturer for slander.

Up to date, there have been comparatively few suits of this kind brought, considering the general looseness of the talk about competitive products and the number of suits which would lie, if anybody wished to bring them. But one of these days some manufacturer is going to decide that an example should be made of somebody, and when that time comes he will have no trouble to get evidence.

I believe that such action would be thoroughly justified. When a manufacturer has spent money and heart's blood in building a reputation for his product, it is outrageous that it should be murdered by the careless — or worse, malicious — word of a dealer. (*Copyright, 1916, by Elton J. Buckley.*) — *Bulletin of Photography.*



# Marks on Negatives Caused by Rain

EDGAR SENIOR

**N**EGATIVES which have been accidentally splashed by rain usually develop a number of semi-transparent spots, each of which is surrounded by a ring of greater opacity than the portion of the image contiguous to it. The question was once asked in an examination-paper on photography whether such marks could be satisfactorily removed after drying. In order, as far as possible, to ascertain the nature of the change which causes these marks to appear, some experiments were made by allowing rain-drops to fall upon a negative. After the film had become dry, the markings left were examined by the aid of a microscope. In this way some very interesting observations were made and, at the same time, a considerable amount of information gained as to the reason for the marks in question. Apart from its action in causing an expansion of the film, the nature of rain generally was considered with regard to any bearing that it might have in explaining the cause of the observed phenomena.

A rain-drop may be considered as consisting of a quantity of water enclosed in a superficial skin of water which is under tension, and this superficial film may be said to mould the drop into a spheroidal form. This superficial skin, or "film," behaves like a stretched membrane, the tension of which is the surface-tension of the liquid, and as the liquid is absorbed by the gelatine film in the ease of a photographie plate, the surface-tension being unchecked, the rain-drop gradually contracts and finally disappears.

Then, again, rain is very generally considered as water simply; whereas it has been found to contain organic matter, acids and various salts in solution varying in quantity with the locality from which the rain was collected. Rain collected in fields away from towns has been found to contain ammonium carbonate; that in towns, sulphuric acid, or acid sulphates, and in the suburbs, ammonium sulphate. The presence of ammonia in rain has formed the subject of important researches. Bergmann, Brandes, Liebig and others have shown the presence of ammonium salts. Among the substances whose existence has been proved in rain are nitrates and ammonia, whereas, according to Liebig, it is only the rain of a thunder-storm which contains nitric acid. To account for the presence of sulphuric acid in rain-water is not easy, although, according to Chevreuil, Vogel and Lewy, sulphates of the alkalis when in contact with organic matter can

become the sources of hydrosulphuric acid, and M. Dumas has shown that this acid, when mixed with air and moisture, and under certain conditions, will become slowly converted into sulphuric acid, owing to the oxidation of the sul-



Fig. 1. Photomicrograph of a mark caused by a rain-drop on a negative—X 20 diameters

phuretted hydrogen in a moist atmosphere. Rain, however, often contains so much ammonia as to neutralize completely any acidity, although in towns the acid frequently predominates. But even if the rain is alkaline when it falls, it soon becomes acid on standing. The presence of iodine is also said to have been detected in rain-water.

From what has now been stated, it is evident that rain cannot be regarded as water simply, and it would be only reasonable to suppose that the substances contained in it might have some action upon a gelatine negative, and so give rise to the markings produced by rain-drops falling upon the film. The writer's experience, however, is against this hypothesis, and this was further supported by the fact that similar markings were not obtained upon collodion-films. The writer was thus led to the conclusion that the markings were due to a physical cause rather than to any chemical action from material contained in the rain, which appeared to be in too small a quantity to have any appreciable action upon the image. In the first experiments ordinary negatives were used, and the appearance by reflected light of the marks left by rain-drops, after drying, was that of a concave surface surrounded by a thickened edge standing out in relief from the surface of the film, while a deep depression occu-

pied the center of the concavity, giving rise to a dark spot in the print. The appearance by transmitted light is shown in the photomicrograph, Fig. 1. Very little useful information, however, could be gained from this, beyond the fact that the particles of silver had aggregated together in the form of a circle, as with anything beyond a moderate degree of magnification the image became lost, owing to the coarseness of the particles of silver. It was, therefore, decided to employ special plates having an exceedingly fine grain. Markings caused by rain-drops upon these were examined with a microscope. The appearance of the image seen is shown magnified 170 diameters in Fig. 2. The object, being small, gave well-marked diffraction-effects, which are seen reproduced in the photograph. The dark band corresponding to that in Fig. 1 could be more easily studied, as the grain of the plate did not interfere, whereas in every other respect the appearances of the marks were identical. A portion of the edge of the same mark which gave the dark band shown in Fig. 2 was then examined with a higher power (3 mm. objective), when it was seen to consist of a series of rucks or corrugations in the gelatine film as shown in the photomicrograph, Fig. 3.

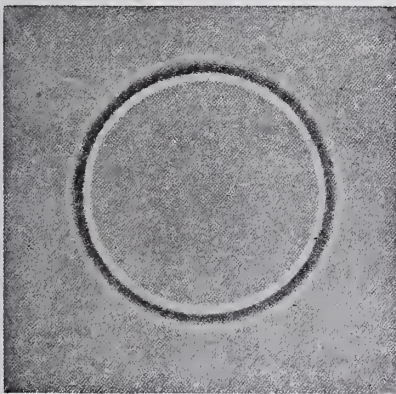


Fig. 2. Photomicrograph of a mark caused by a rain-drop on a gelatine plate of very fine grain — X 170 diameters

It thus would appear that the effect of a rain-drop on a gelatine film is to cause it to expand and form a series of corrugations which follow the general contour of the drop of rain. In this way the gelatine containing the silver forming the outline of the marks becomes thickened, with the result that in the negative each mark is seen surrounded by a band of greater opacity, as already stated. If, therefore, the markings caused by rain-drops are due to the cause men-

tioned — and there is every reason to believe that they are — then any chemical treatment for their removal would be unnecessary, and we have found that soaking the negative in plain water, or, better still, in water to which a little ammonia had been added, was all that was required to obliterate them completely. And this is not only our own experience, but that of others who have tried it; and in any case that would not yield to this treatment, the reason would in all probability be found to be due to some other cause than that dealt with here.

*The British Journal of Photography.*

### Ways To Ensure Correct Exposure

SOME means should be used to determine the correct exposure, there being two types of instrument for the purpose, the first depending on the darkening of a piece of paper, the time required for it to match a standard tint being observed; the second being based on the fact that the correct exposure for different conditions of subject and light has been determined by experiment, the results being given in the form of a table. Either of these methods may be employed with satisfaction, though both possess the defect of failing in a weak light, such as that of evening. Of the former type the best are the actinometers of Wynne and Watkins, and of the second the most convenient is the Wellcome Exposure-Calculator. This does not mean, however, that there are not others equally good, the tables given every month in PHOTO-ERA being quite satisfactory. In weak lights the only thing to do is to determine as nearly as possible the exposure by reference to a table, then increase it in accordance with the dictates of previous experience. Some workers depend entirely on experience; but this ability comes only after years of practice, and even then is apt to lead to error when the conditions are unusual. — PAUL LEWIS ANDERSON, in "*Pictorial Landscape-Photography.*"

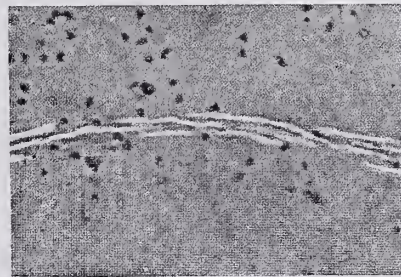


Fig. 3. Photomicrograph of a portion of the image in Fig. 2 — X 1,000 diameters





ROTUNDA WITH SWANS  
PANAMA-PACIFIC EXPOSITION  
W. H. RABE





SUNRISE

KATHERINE BINGHAM

## Requirements for Producing Brilliant Negatives

FR. C., IN PHOTO-WOCHE

**I**T cannot be said that a brilliant negative is in all cases an ideal one. The advocate of brilliance will often have to act contrary to his predilections in artistic photography, at least, in which one strives for a correct distribution of light and shade rather than for brilliance of the picture. But photography is many-sided, and artistic photography is only one branch of it. Besides, it is better, when artistic effect is desired, to soften down the brilliance, when printing, by a suitable selection of the materials for the positives. In other branches of photography, however, both brilliant positives and negatives are unconditionally demanded. But to attain this object, all the requirements must be fulfilled, and accordingly one must know the circumstances in which brilliance will suffer, so that he can take the proper steps to avoid them.

A brilliant negative must have a wide range of tones — the contrasts between light and shade, with all the intermediate gradations, must be well defined, so that the difference can easily be recognized. The highest lights must be well covered and, at the same time, well set off from the lighter middle-tones; whereas the deepest shadows in the negative must be quite clear in order that in the positive they will have their full depth, and definition should not be lacking. Therefore,

the less dark portions must show a lighter silver-deposit, even if it is but slightly less, otherwise the negative will be “glassy” and the shadows will look rusty and poorly defined.

Generally speaking, the negative cannot reproduce an object the same as it appears in nature. The first requirement of a brilliant negative, therefore, is that, even if the object is sufficiently brilliant, it must also show proper contrasts. If these are not present in the object itself, then we must attain our purpose by suitable lighting — in the studio or in interiors by means of curtains, reflecting-screens and other apparatus; in the open air, in landscapes, architectural views, etc., by a suitable selection of the point of view and of the time of the day. In this, not only the position of the sun but the weather plays an important part. The duller the weather, the more monotonous will be the lighting and the less brilliance. With the sunlight directly in front, the view will be flatter and hence less brilliant than when it comes from one side, which brings out the form of the object to better advantage by the shadows.

Then the brilliance of the negative may be ruined by wrong development, which may also occur even if it is done normally. The selection of the developing-agent is of importance, as well as the compounding of the solution and its



temperature. Through these three factors the speed, strength and ultimate density of the negative are regulated, and on them, therefore, the brilliance depends in a large measure.

The sensitized coating, itself, is not without influence; for in order to obtain a rich scale of tones it must contain a sufficient amount of silver, and with this a sufficient thickness of emulsion. The more sensitive the latter is, the larger will be the granules of silver bromide and of the reduced silver. But with larger granules and the same thickness of coating and content of silver, it is more difficult to obtain sufficient density than with smaller granules. For that reason, a more highly sensitized plate will give a more monotonous and less brilliant negative on account of the lack of density in the highlights, if it does not have a thicker coating than usual. Of course, the price is higher; but we do not always recognize the improved quality in the cost.

In a certain sense, the kind of gelatine used in the coating may also have an influence on the brilliance; and the same developer may produce different results if it penetrates the coating with varying rapidity. The penetrability of the gelatine, however, depends virtually upon the amount of tanning it receives.

Brilliance, at least in the lighter portions of a picture, is frequently affected by halation, which is very apt to destroy the finer tracings in the case of large light-surfaces, such as women's clothing, by spreading over parts that are not entirely white, and blending them with the highest lights. But a picture that shows no details in the light portions cannot be called brilliant, and is also unacceptable from the artistic point of view. If, however, we try to avoid halation by shortening the exposure, the shadows and middle-tones will be underexposed, and in the case of a portrait the face will be too dark. To avoid this trouble, non-halation plates must be used, or, if ordinary plates, they must be protected on the back by some light-absorbing wash or by black paper.

Fog is a great hindrance to brilliance, as is also insufficient clearness in the shadows. Fogging may result from various causes, chief among which is exposure to chance rays of light, either when placing the plate in the holder, during exposure, while developing, or at the beginning of fixing, owing to insufficient protection. Even in the factory, itself, when packing the plates, there is a possibility of this occurring. Leaks in the camera and in the plateholders are often the cause of fogging.

But purely chemical influences may produce fog. In the first place, it may arise from a wrongly compounded or manipulated emulsion;

or the plates may have been kept in an unsuitable place, where atmospheric conditions affect them injuriously. Even good dryplates will show fogging, if kept too long; for there is a limit to the keeping-qualities of the best materials. Finally, fog may be caused by the developer attacking the unreduced portions of the plate, especially if the former has been wrongly compounded or is too much exhausted.

The brilliance of the negative may also be affected in various ways by the lens, as, for instance, when taking views against the light, or by side-rays from the sun or an artificial light, producing light-flecks. This depends frequently upon the degree of correction the lens has received. As a rule, stopping down the lens exaggerates these light-flecks, which are caused by reflections from the lens-surfaces, and they are more apt to appear the wider the separation between the individual lenses. Similar light-flecks are also caused by badly blackened diaphragms, on which bright spots appear; a poorly blackened lens-tube or shutter has the same effect.

Moreover, if a good picture is wanted, the lenses should have a good polish. Cheap, low-grade instruments leave much to be desired in this respect; whereas even with good lenses and the best of polishing, careless handling, or mechanical, atmospheric or chemical influences soon spoil them. Lenses should be well protected from dust, chemical vapors, direct sunlight and, especially, from dampness, and should be carefully cleaned from time to time with a soft linen cloth. If dust is rubbed into the glass, fine scratches are likely to result, which, taken together, tend to weaken the light and preclude the possibility of getting a fine polish — a condition which only an optician can remedy.

The dulling of the surface of the lens may be only temporary, however, as when caused by a deposit of moisture, which is particularly apt to occur in winter or in the mountains, when the warm breath comes in contact with the cold glass, or when the surrounding air suddenly becomes warmer. These deposits generally disappear of themselves — it is only necessary to wait a few minutes. If the trouble comes from dust, that can easily be removed.

Faulty correction of the spherical and chromatic errors of the lenses also affects the brilliance of the negative to a certain extent by producing lack of sharpness of focus; and, besides, there is the optical defect called "coma," which causes irregular action of the light outside of the center of the plate.

Lack of brilliance may, therefore — as we have shown — arise from a multitude of causes; but in most cases they are not difficult to remedy.

# Adventures in Home-Portraiture

GRACE C. RUTTER



THE greatest difficulty which the average amateur has to overcome in portrait-work is lack of light. Our homes, being built to live in — not for photograph-galleries — have windows of polite width, placed at frequent intervals along the outside walls, at the proper height, for observation-purposes only. But — who wants studio-lighting in home-portraiture? The operator, perhaps, for it would make the exposure easier; but surely not those who revel in the finished picture, since that light is too much at variance with the easy, unconventional attitudes which are most natural.

It is not necessary to push out our walls and raise and widen our windows to photograph our loved ones successfully amid the dear home-surroundings; but we cannot produce satisfactory results right off, at the desire. A deal of study and experiment is oftentimes done before our efforts are rewarded; but when we finally get grandmother's snowy hair and dear old wrinkled face, or the smiling, happy countenance of our baby recorded on a negative — ah, it is worth all the time and spoiled plates. Whereby hangs a tale.

The amateur's pictures are different — far different — from the professional's, and, in a way, of greater worth. Expert service, perfect lighting and the superiority of everything professionally photographic can be bought with money; yet naught but love would prompt the patient coaxing to bring out baby's dimples or the watchful eagerness to catch father's fleeting expression — the one we want — and the hours of tedious developing and printing, trailing upstairs or down cellar, carrying water and staining and roughening the hands. I know whereof I speak, for I am one of the struggling — and often straggling — army of experimenters. We work in office or shop, six days in the week, to buy the stuff which we waste nights and Sundays on our hobby. It is a weary and expensive road, this Photographic Lane, and many a disappointment and backache elbow the flat purses and heartaches of its *habitues*. But you could hardly keep us away from our cameras with a gun. Is it a groping after an artistic vision which Nature or Fate — or another party whom we can impersonally blame — denied us when she gave us no talent for drawing? I do not know; but I do know that, although I cannot use a pencil, I can make pictures — with a Kodak, often good ones, too. So there; Fate! And I would n't dare venture here

did not a number of successful ones stand out as milestones behind me.

But how can we reconcile our living-room windows with good pictures? An anastigmat lens? Ah, that desideratum of ambitious photographers, whose purses, sadly, could hold more.

For you know, when you take pictures for a recreation — as we do until we learn to take them for a pecuniary profit — our friends' good wishes are not market-value for an outfit; and who is to pay for the spoiled plates, spilled developer, under-timed paper, et cetera et cetera, but you, yourself. And such performances do not make for satisfactory bank-accounts. I know; indeed, I do!

But after awhile you learn not to waste and not to under-time, and — happy thought — the rapid plate will bridge the gap between our limited light and the commonplace rectilinear lens, and you will soon make enough money to buy an anastigmat. Hurrah!

In the meantime — pray for sun and summer and plenty of rain at night. Why rain? For the sake of your mixing of solutions, of course. Take the advice of one who knows, and do not mix your solutions with tap- or pump-water, even if you must set out the best china cream-jug to catch the raindrops, or tote it on your back from the nearest stream. This tap-water, often strong in iron or lime, is responsible for many unaccountable stains on negatives; but it will answer for washing-purposes.

With sun and summer, or sunny winter, the hours between eleven and three, throw up all the shades with a happy bang, steal a sheet from the bed, drape it artistically over the only horse allowed in the house and proceed. Do not tell the anastigmat-equipped photographers, for they look askance if we mention anything but a north light, but say that with our rectilinear lens the south window is our hope! Here is where I pose the baby, and nowhere else could I catch that priceless gurgle — you feel it, though you see only its accompanying smile. I put up every shade in the room except those behind the baby and in front of the lens. If the sunlight is shining directly in the window, I maneuver baby-boy so none strikes him, and sometimes I drape the cheerful gleams with a black cloth over the window to exclude them. The sheet-reflector is placed at the usual angle to throw light on the baby's shadow side. Herein, again, I differ with the well-armed photographer, for he uses a re-





THE END OF A GLORIOUS DAY

W. T. WRIGHT

flector only the size of the window, whereas mine is twice that size — I must, to make up for the limits of my lens. If baby cannot be trusted to sit alone, his mother either holds him or crouches behind the chair and supports him from falling. She is invisible, for the chair is covered with a dark auto-robe. The chair should be a few inches back from the nearest side of the window and about three feet from it. The camera has to be placed low, and, perforce, the photographer kneels — if not humbly — under the black cloth to focus on the ground-glass. Personally, I prefer a side-view of the baby, with his face turned full to the lens, to show his feet less prominently; but his age often forbids this pose, and, really, the little shoe-soles add to the record, so do not

worry if baby kicks his dress away after you have carefully covered his feet. For the exposure, one must again kneel to direct baby's gaze at the identical height of the lens. Cajole him into the desired "face" and — eliek! there it is recorded for the admiration of adoring relatives for generations to come. For when Willie grows up and his best girl comes to visit us, she is always shown "how Willie looked when he was a baby," and again the picture is scanned eagerly "to see if Will's baby looks like he did."

Getting the exposure made is one big battle won, and the mother emerges — half smothered — from her position; we emit a happy sigh and think about developing. Other developers may be as good, but pyro is my first love, and has al-



“BRIGHT EYES”  
IRA D. SCHWARZ





ways been so true to me I still stick to it, using a tested tank-formula. The tank is rinsed, and the specified quantity of each A, B and C solution poured in, one ounce of A, one and a half ounces of B and one ounce of C to sixty ounces of rain-water, alternating warm and cold until the thermometer registers sixty-five up to sixty-six or seven — never less. We carry the full tank gingerly upstairs, balancing the plateholder under one arm, and set them on a shelf in the closet which mother, to keep peace in the family, emptied for our use — “to muss in,” she said. It is mussy work, but we do not want to quit. We close the door and light the smoky ruby-lamp and put the precious plate in its bath. We run

up and down stairs to turn the tank every five minutes and bring up a tray of fixing-bath. On the last trip we smuggle the wash-basin up, for we hear our big brother returning from his day’s work; his ablutions can wait, but that plate has been developing thirty minutes, and it positively must be rinsed, and what is as handy as the wash-basin? We leave the negative in the fixing-bath and answer brother’s shouts joyfully, for it has come out a crisp, well-detailed negative, and life is still worth living. A cheer, each, for the rapid plate, the south-window and good, dependable old pyro, and a wee one for the anastigmat lens — our anastigmat — which a hopeful vision sees in the future.

## The Circle of Confusion and the Amateur

A. H. BEARDSLEY



THROUGHOUT amateur photographic literature we come upon the term “circle or disc of confusion” as applied to various considerations of definition, depth of field and hyperfocal distance. In the majority of books and monographs this term is merely referred to and not fully explained. A typical reference to this term, when giving the formula for finding the hyperfocal distance, is the statement that the formula is “computed on a basis of an allowable circle or disc of confusion of  $\frac{1}{100}$  of an inch as the standard of sharpness.” Of course, the amateur can work out the formula successfully by arbitrarily taking things for granted and using the “circle of confusion of  $\frac{1}{100}$  of an inch.” However, just what is this “circle,” and why is it “ $\frac{1}{100}$  of an inch” instead of a smaller or greater figure? Whether the authors of these books and monographs assume that the amateur knows the meaning of “circle or disc of confusion,” or whether they have not the space to explain the term fully and non-technically, is an unanswered question. From the many inquiries received, based upon an incorrect understanding of this term, I am led to believe that an effort to dispel some of the “confusion” from the “circle of confusion” will be appreciated.

Theoretically, a good photographic lens focused upon an object should reproduce that object point by point upon the plate. Practically, we find that the points reproduced are not true points but nearly true points; and that the planes in our object, *outside* of the plane focused upon, are not registered as even “near” points but as *circles*. Since our object is composed of a

great number of individual points, it is naturally our desire to have each point reproduce itself clearly, as a point, in order to make our picture sharp. What actually happens is that the plane focused upon is registered very nearly in true points, and all the other planes of our picture in circles of greater or lesser diameter. The more these circles overlap one another, the more out of focus become the planes in our picture, upon which we are unable to focus sharply without throwing our principal subject into circles, and thus spoiling our picture. Try as we may, there will always remain some one plane which will be reproduced in circles instead of in points. No photographic lens of whatever make or type is at present capable of rendering an exact duplicate of an image in *all its planes* point by point upon the plate.

As stated above, we find that by confining ourselves to *one plane* in our picture we can reproduce upon the plate an image which is a nearly true point by point duplicate of our original. We have also found that other planes are reproduced in circles of *greater or lesser* diameter, and that some of these “lesser” circles are not unduly noticeable at a reading-distance from the eye. In short, we find that there is considerable “stretch” from the point to the “lesser” circle reproduction of our picture. Next we discover that the human eye finds difficulty in distinguishing a smaller circle than  $\frac{1}{100}$  of an inch. Right here our quotation regarding “the standard of sharpness” is accounted for. In other words, if we can keep the “stretch” from a point to the “lesser” circle *within* a diameter of  $\frac{1}{100}$  of an inch we will be able to get *more* than one plane

of our picture satisfactorily sharp to the eye. Hence, the standard allowable "circle or disc of confusion" for ordinary requirements is  $\frac{1}{100}$  of an inch.

Let us suppose we have before us a landscape in which an old-fashioned farmhouse is partially screened from the road by two giant elms between which runs a path entered from the road by a gate. Naturally we wish to get all three—house, trees and gate—as sharp as possible. The house is of greatest interest and we focus sharply upon it; but to our dismay we find the trees and gate out of focus. Next we focus upon the trees to see if that helps matters. Yes, but neither the house nor the gate is clearly reproduced. At this point in the problem we recall having read or heard about "stopping down" in just such cases to gain depth of focus. We try it and find that the house, trees and gate are now all *reasonably* sharp, or, in other words, we find that the definition of the entire picture *satisfies the eye*. What we have really done by stopping down is to prevent each point in our picture from "stretching" to a larger diameter than  $\frac{1}{100}$  of an inch, and therefore our entire picture is pleasing to the eye. This is the true reason for stopping down to gain depth of focus. However, all this does not alter the fact that the trees will, nevertheless, be the most sharply defined in points so small in diameter that the eye cannot take cognizance of them in relation to the definition of house and gate.

We find by experiment that if we continue to stop down to about F/200 we produce the exact opposite effect upon the "stretch" from a point to a "lesser" circle. Instead of keeping the "stretch" within the standard diameter of  $\frac{1}{100}$  of an inch we begin to increase this diameter and to cause all manner of light dispersion. The statement is made in answer to correspondents who wish to know how far stopping down may be continued with advantage to depth of focus and definition. Generally speaking, stopping down need have no other limitations than those imposed by illumination and exposure.

Quite frequently an inquirer wishes to know how small a circle of confusion can be produced. The answer to this question depends upon the lens and upon the grain of the plate employed. As a rule, without special equipment, the grain of the plate interferes with the accurate measurement of the circles of confusion long before their minimum diameter can be computed. Most high-grade lenses are capable of producing circles of confusion from  $\frac{1}{500}$  to  $\frac{1}{2000}$  of an inch in diameter. Some lenses do even better, but the diameters indicated are the rule in the majority of cases. Remember, we have confined ourselves

to *photographic* lenses. Microscopes and delicate scientific instruments are equipped with lenses of a type which practically eliminates the question of circles of confusion. These lenses more nearly register a point, *literally* as such, than any other known optical system.

We have been considering  $\frac{1}{100}$  of an inch as being satisfactory, since the eye cannot distinguish a circle of smaller diameter. However, the great interest now manifested in small cameras and in enlarging from small negatives has necessitated the use of a circle of confusion of  $\frac{1}{200}$  or  $\frac{1}{500}$  of an inch in diameter. Because nearly all manufacturers of lenses now use  $\frac{1}{100}$  of an inch in their calculations the average person can detect no difference between a 5 x 7 contact print and a 5 x 7 enlargement made from a  $1\frac{1}{2}$  x  $2\frac{3}{8}$  inch negative. In applying the formula for finding the hyperfocal distance it has been customary to use the  $\frac{1}{100}$  of an inch circle of confusion in computing the distance. Now, however, the majority of photographers use a standard of  $\frac{1}{200}$  or  $\frac{1}{500}$  of an inch on account of the strong probability that the negatives will be subsequently enlarged.

In conclusion, if the amateur can visualize a circle of confusion as a dot or point which is capable of being "stretched" like a rubber band, he will not again be puzzled by the term "circle or disc of confusion." He will realize that though this point can be "stretched" there is, nevertheless, a limit, and this limit is controlled solely by his own eye. The intelligent use of his eye and the correct manipulation of the stops at his command will permit any amateur to focus his camera efficiently and successfully. Moreover, should he possess a roll film camera that is focused by scale, he will be able to work out his own hyperfocal distance for each stop employed. He will be able to realize with complete understanding the very important part played by the "circle of confusion" as a factor in his photographic success.

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SUBORDINATION is rather a quality than a principle, and means simply that the detail which is introduced to explain or to give emphasis to the principal thought or object must not compete with this in interest. It will be apparent that, should this be the case, the effect of the principal object will be diminished, and one of the greatest difficulties that the photographer has to encounter is the inclusion by the lens of excessive detail, special objectives having been designed, and methods employed, to avoid this fault.—PAUL LEWIS ANDERSON, in "*Pictorial Landscape-Photography*."





U. S. CAVALRY IN MEXICO

Copyright, 1916, International Film Service



# Burson Takes a Flashlight

MICHAEL GROSS



WE'LL take this group in pyramid-formation," Burson announced, as he arranged the chairs so that they formed a sort of triangle; then — although no one had asked him to explain what a pyramid-formation meant — he went on, "you see, the idea is to get everybody in focus and still maintain an harmonious grouping."

As none of the company offered to contradict him, Burson seated everybody, set up his camera, focused, then got out his flashlamp and powder.

"I'm going to take a flashlight," he said, as one who is about to risk his life, but does so cheerfully, "and though this is my first attempt, I've learned enough about the game to get everything all right. Now don't get frightened when the flash goes off," he added solicitously, "it'll all be over in a jiffy."

Having given what he considered due warning, Burson set to work in earnest. He pressed the bulb of the camera, closing the shutter, and then inserted a plateholder. Pouring some flash-powder into the groove of the lamp, he adjusted the cap that was to spark it off, gave a last look to see that all was well, and then pressed the bulb again — to open the shutter.

"All ready, now," he warned, standing a few feet back of the camera, the flashlamp held high above his head, exactly as the illustration in his correspondence-course textbook showed; then, "Steady, everybody" — and he pulled the cord, setting off the flash.

"Fine," he commented, after the smoke had cleared a little, "you stood that like battle-scarred veterans."

Calmly closing the shutter, he felt in his coat-pocket for the slide of the plateholder, but failed to find it. Perplexed, he hurriedly went through every other one of his pockets, looked on top of the camera, on the floor, everywhere, but without result. Then a great light broke in upon him and he glanced despairingly toward the back of the camera. The plateholder was just as he had put it in. In the excitement of seeing to everything else, he had forgotten to draw the slide.

"It won't do," he mused, "to let the bunch know what's happened. I'd never hear the end of it;" so he swallowed hard, and then, forcing a smile, said, in a voice meant to be flippant, "Suppose we arrange the seats differently and try another one, folks" — and without waiting for an answer he commenced to rearrange the

chairs and then went through all the other preliminaries again. This time he made sure to withdraw the slide, taking pains to put it into his right-hand coat-pocket. Then he pressed the bulb, gave another warning, and, "bang," the second flashlight had been taken. He pressed the bulb again and reached toward his pocket. "Got you this time," he muttered gleefully, as his hand closed over the slide. He inserted it and withdrew the plateholder.

To his surprise he noticed, as soon as the holder was out, the inverted image of the chandelier-lights focused on the ground-glass. "What the devil does this mean," he murmured perplexedly, "I'm sure I closed the shutter before I put back my slide." He was struck dumb for a moment and thought the matter over. At last he hit upon the solution. He had forgotten to close the shutter when he was through focusing. After the slide was drawn he had pressed the bulb, under the impression that he was opening the shutter. Instead of opening he had closed it. The flash had gone off while the shutter was closed; that horrible truth Burson had to concede. Afterwards he had pressed the bulb, thinking to close the shutter, instead of which, as was plainly to be seen, he had again opened it.

Burson groaned in despair. "I'll surely get it right the third time," he promised himself grimly; "but how can I work it so that no one suspects there's something wrong." All at once a happy thought struck him.

"You, Sykes," he exclaimed, picking on the littlest man in the crowd, "I saw you jump just as I shot that last flash off, and I think it spoiled the picture. Might as well take it over again," he added laconically, "while I have the machine up" — and without waiting for an assenting answer he fixed up another flash, put a fresh holder in the camera, drew the slide, opened the shutter and let fly.

"All hunky-dory this time," Burson exulted, as he discovered everything in order. Then, turning to the company, he said, "I'll develop these before I go to bed and make some prints to-morrow."

The night dragged on endlessly; but finally the company left, and Burson was prepared to do some developing. "There's no use bothering with the first two plates," he mused, "so I'll concentrate on that last one and make it so good that everybody will forget about the rest."

A little while later he had the plate in the de-





*Copyright, 1916, W. R. Bradford*  
W. R. BRADFORD

OLD MAN GROUCH

veloper and was eagerly watching for the first trace of the image to appear. A few black spots, which he recognized as the chandelier-lights, first made their appearance, and Burson, delighted, commenced to rock the tray furiously. Soon other details came up, albeit faintly. Even at this early stage of development Burson noticed a peculiar condition of the plate. The figures in the group seemed vague and hazy, as if the picture had been taken through a pinhole-lens.

Thinking that prolonged development would overcome the fault, he kept the plate in the developer until there was as much image on the back as on the front; but still the haze stuck.

"The plate can't be lightstruck," Burson thought, "or no detail at all would come up. But then," he consoled himself, "it may print out all right."

But the printing of the negative, the next night, showed Burson clearly where he had been

at fault. The finished picture would have passed anywhere for a scene of London on a foggy night; the only incongruity that would occur to a person that saw it would be why so many people were foolish enough to sit outside in such weather. Burson looked at the print for a moment meditatively. Finally it dawned on him that, after taking two flashlights in a small sitting-room, he should have opened a window and let some of the smoke out instead of trying to photograph through it.

. . . . .

A little while later a highly nicked flashlamp, together with a partly-used box of flashlight-powder, could be observed flying out of the window of Burson's combination bedroom-laboratory, to crash, a moment afterwards, down to eternal oblivion into the back-yard, five stories below. Burson was through taking flashlights.



# EDITORIAL



## Learning from the Old Masters

WITH an honest desire to help photographers make their efforts, notably in portraiture, as artistic as possible, teachers and critics have urged the study of the old masters in painting, with special reference to lighting and composition. In accordance with this sage advice, photographers selected Rembrandt as their model, and soon the Rembrandt style of lighting a portrait became the standard among the best portrait-photographers the world over. To be sure, these Rembrandt-effects were not servile imitations of the firm and rugged manner of the Dutch master, but rather judicious adaptations, for the abrupt chiaroscuro was ill suited to a monochrome-presentation of the human countenance.

Rembrandt-lighting is described as a manner of lighting by which the head of a person receives one-quarter light and three-quarters shade, the light coming more or less from behind. Now, it is known that Rembrandt changed his style of painting as he progressed, and whereas many of his pictures show strongly contrasted effects of light and shade, others display illumination that is broad and more distributed. To the latter class belong portraits of himself and his wife, Saskia. Here there seems to be a flood of light and no violent light-contrasts, characteristic of the "Johann Sobieski," the (so-called) "Night-Watch" and others of his pictures. Rembrandt's simple and dignified treatment, the absence of distracting accessories and the frank presentation of the inner man — the soul within — are what appeal strongly to the artist-photographer. These attributes are found united, probably, in no other artist. Yet the photographer may study with profit the portraits of other great masters. There are great and powerful portraits, in the art-museums of the world and in private collections, by Holbein, Raphael, Titian, Velasquez, Hals, Rubens, Bol, and of the lesser masters — Van Dyck, Reynolds, Gainsborough, Romney and Raeburn which surely merit serious study. Nor are the portraits of the early American artists to be neglected by the student-photographer — portraits by Copley, West, Stuart and Allston being found in most of the art-museums and private galleries of the United States.

Assuming that the study of the portrait-works of the great masters is indispensable to the training of portrait-photographers, who thus obtain a clear demonstration of composition, disposition of masses and direction of line, the Editor is aware that opportunities for such study do not present themselves to every one. Even the Metropolitan Museum of Art, New York, with its numerous authentic works by the old masters, is easily accessible only to the minority of those desirous to visit it. Fortunately, nearly every photographer has the means to acquire a number of very excellent photographic reproductions of famous paintings, including the important portraits here referred to. They may be had in about 8 x 10 size, for less than two dollars each — larger sizes at proportionate cost — from the New York agencies of such reliable art-publishers as Franz Hanfstaengl, Braun & Company and the Berlin Photographic Company.

Now, with one of these admirable reproductions before him, the student in monochrome must bear in mind that, in painting, color plays a fundamental part in harmony, unity and balance, and that he cannot utilize in his work objects and accessories with the same freedom as does the painter. Indeed, the student-photographer will find that, as a believer in simple compositions and quiet backgrounds, there exists a wide gulf between painting and photography, sister-arts though they be. The wonderful portrait of the merchant Georg Giske, by Holbein, in the Berlin Museum, represents the young merchant seated in his business-office and surrounded by all the accessories of his daily occupation — the papers, the writing-materials, the books and ledgers, the string in a blue and gilt ball suspended from a shelf, and, oddly enough, an elaborate glass vase containing some red carnations. All these details, on which the light falls from the front, are rendered with marvelous precision and delicacy, yet not in the least do they detract from the face, whose owner, in the act of opening a letter, seems to look out at the beholder. In all but the numerous and, ordinarily, disturbing details, the portrait is a distinct help to the student in photographic portraiture. Again, the maker of indoor-groups should not be influenced too much by the arrangement of the figures in such pictures, however distinguished, as "The Maids of Honor," by Velasquez. As a



painting, this picture is a masterly composition. As a monochrome, it would be open to criticism. Nor are the old masters always a safe guide in the tasteful assembling of objects in representations of still-life. Wonderful, indeed, are these arrangements by the old Dutch painters. Game, crustaceans, fruits, vegetables and kitchen-utensils are thrown together indiscriminately, but executed with marvelous realism and almost microscopic precision. The still-life painters of to-day show more artistic judgment in their designs, most of which, however, lack spontaneity and conviction. In these respects — and beauty, too — the photo-pictorialist has excelled the artist of the brush.

At the same time, the student must remember that conditions of dress and living have undergone considerable change since the days of the old masters, and that taste and appreciation of art have been greatly improved. The great painters blazed the way, and we of to-day should reap the advantage of their labors.

### The War Affects Camera-Design

**D**ESPITE the many hardships imposed upon photographers by the European war, the conflict has not been without its beneficial influences. The Allied blockade of Germany, for instance, has awakened every nation to the weakness of depending upon manufacturers in another country to provide chemicals of imperative necessity. In America the chemical famine has stirred Yankee ingenuity and resourcefulness, won the support of capital, and, while there are still many problems to solve, we already rejoice in many standard chemicals, photographic developers and several creditable substitutes manufactured in the United States. A nearly disastrous situation is gradually being relieved; prices are generally on the decrease, and the future outlook is very hopeful.

Not only has want caused by the war aroused American initiative, but the very processes of warfare itself have influenced the design of several instruments of peaceful life and recreation. Upon the scientific precision of the range-finder depends the death-dealing accuracy of modern artillery, and if shooting with these engines of war can be rendered so certain by the use of such an instrument for the measuring of distances, why not apply the principle to camera-focusing? This has been done in the case of the No. 3A Autographic Kodak Special, a feature of which is the ingenious new Kodak Range-Finder. Built into the base of the standard supporting the lens and shutter, it consists of three mirrors and a prism. As seen in the range-finder, the view about to be photographed is divided into three

adjoining parts. When the focus is incorrect the lines of the three images are not continuous, lines in the central mirror failing to connect with corresponding lines in the adjoining mirrors. By turning the focusing-screw forward or backward, as necessary, the lines in all three mirrors may be made continuous, and when this result is attained the lens is in correct focus for the chosen subject. Thus it is no longer necessary to estimate distances with grave likelihood of error; the problem is solved with ease, dispatch and exactness. This clever device greatly enhances the worth of an ever-popular instrument, making strong appeal to all, and especially to those who intend to print by enlargement, for it ensures good definition.

### Rivals of Swiss Enlargements

**S**INCE PHOTO-ERA called attention to the great superiority of enlarged Swiss photographs of Alpine scenery over similar productions of American make, as sold commercially, considerable interest has been aroused among American photographers eager to measure their ability with that of the Swiss craftsmen. They point to the one great advantage enjoyed by the Swiss photographer, viz., the ease with which he can cover his small mountain-territory, whereas the mountain-ranges of America are vast by comparison and not easily accessible to the photographer. If only the proper degree of enterprise were shown by some American art-publisher, skilled and experienced photographers engaged, and an interest created among the buying public, our picture-lovers would have on their walls examples of our own mountain-scenery, which for beauty and variety cannot be matched on the face of the globe.

In this connection it may interest those photographers who aspire to equal the skill of Swiss photographers, to see what the English have accomplished in the field of enlarged photographic prints. Just now a collection of about fifty enlargements from negatives by H. G. Ponting, official photographer of Captain Scott's famous expedition to the South Pole, is being exhibited in the larger cities of the United States. In these prints — which are of great size — the artistic character of the small, sharp negatives has been brought out with superb effect. The ice-fields, in particular, are presented with wonderful realism. Nothing is lost of the beautiful gradations of light and shade. The cloud-effects of that virtually inaccessible region add immeasurably to the pictorial interest of these enlargements. Our own majestic scenery cries for similarly successful interpretation.



# ADVANCED COMPETITION



Closing the last day of every month  
Address all prints to PHOTO-ERA, Advanced Competition  
383 Boylston Street, Boston, U. S. A.

## Prizes

*First Prize:* Value \$10.00.

*Second Prize:* Value \$5.00.

*Third Prize:* Value \$2.50.

*Honorable Mention:* Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.

## Rules

1. This competition is free and open to any camerist desiring to enter.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. **Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.** Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P., or black-and-white paper having the same gradations and detail.

3. *Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name, address, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what competition it is intended.*

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with *double thicknesses of stiff corrugated board, not the flexible kind, or with thin wood-veneer.* Large packages may be sent by express very cheaply and with indemnity against loss.

7. The prints winning prizes or Honorable Mention in the twelve successive competitions of every year constitute a circulating collection which will be sent for public exhibition to camera-clubs, art-clubs and educational institutions throughout the country. The only charge is prepayment of expressage to the next destination on the route-list. This collection is every year of rare beauty and exceptional educational value.

## Quarterly Miscellaneous Competitions

In order to extend the opportunities for participation by a larger number of our readers, and to broaden the scope of the entries, these will be a feature of 1917.

## Awards — Figures in Landscape

Closed August 31, 1916

*First Prize:* Louis F. Bucher.

*Second Prize:* J. Herbert Saunders.

*Third Prize:* W. Stelcik.

*Honorable Mention:* Guy A. Boeche, Rupert Bridge, F. E. Bronson, Kenneth Dows, Mrs. C. B. Fletcher, Gustav Glueckert, Mrs. C. S. Hayden, Judson Hayward, Wm. R. Henry, Suisai Itow, Taizo Kato, B. F. Langland, E. D. Leppert, W. C. Marley, Richard Pertuch, H. B. Rudolph, Geo. P. Russell, Myra D. Scales, Harry N. Wheaton, Belle M. Whitson, Alice Willis.

Special commendation is due the following workers for meritorious prints: W. R. Bradford, Mrs. W. E. Clarke, F. H. Cloud, Winn W. Davidson, G. C. Engard, Harriet J. Goodnow, A. B. Hargett, Bertram F. Hawley, F. W. Hill, Mrs. Howard Hoke, Franklin I. Jordan, T. W. Kilmer, M.D., W. H. McCrum, Richard D. McCue, Alexander Murray, Anson M. Titus, Elliott Hughes Wendell, J. Swing Willis, Walter G. Willis.

## Subjects for Competition

"Marines." Closes October 31.

"Camp-Scenes." Closes November 30.

"Flashlights." Closes December 31.

"The Spirit of Christmas." Closes January 31.

"Miscellaneous." Closes February 28.

"The Spirit of Winter." Closes March 31.

"Home-Portraits." Closes April 30.

"Miscellaneous." Closes May 31.

"The Spirit of Spring." Closes June 30.

"Landscapes with Figures." Closes July 31.

"Miscellaneous." Closes August 31.

"The Spirit of Summer." Closes September 30.

"Vacation-Pictures." Closes October 31.



Photo-Era Prize-Cup

In deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

A BOOK or music may provoke tears; never a picture or a piece of statuary.—*Alfred Stevens.*





“THERE 'S ONE!”

FIRST PRIZE — FIGURES IN LANDSCAPE

LOUIS F. BUCHER



SECOND PRIZE  
FIGURES IN  
LANDSCAPE



GAMINS

J. HERBERT SAUNDERS

### Flashlights — Advanced Competition

Closes December 31, 1916

BECAUSE of occasional accidents with flashlights there seems to exist in the public mind a not entirely unjustified prejudice against their use. In its primitive form of the open flash, either pistol, cartridge or loose powder, it has many objectionable features. In the first place, the powder so used is highly explosive, and great caution should be exercised in its use to guard against scorched fingers, ignited curtains or smoked ceilings. The smoke and dust from it are also a nuisance which one can hardly blame the house-owner (or house-keeper) for disliking.

There are many modern improvements, however, in the use of the flash-powders, and several other flash-producers, that are less dangerous and cleaner to use. The portable skylight, so-called, is an admirable substitute for the open flash, diffusing the light and taking care of the smoke. The Eastman flash-sheets are a very convenient medium, and, with the equipment they furnish for using them, there is little danger,

though the smoke-nuisance is not avoided. Perhaps the safest and least objectionable light is that of the pure magnesium. This may be used as a powder, to be blown through the flame of an alcohol lamp, or as a "ribbon," in which form it is exceedingly compact and convenient to use. The objection to the magnesium is that it is slower, and, if children are to be taken, the plate may show movement.

Hand-flashlamps, like the Agfa and Imp, are highly developed instruments in their present form, and a few of them, such as Prosch and Smith's Dependable, can be used on a standard supporting a smoke-bag, the Prosch employing dry-battery cartridges fired electrically.

Whatever medium is used, too great care cannot be taken to avoid all danger from loose draperies that might be ignited or from too close proximity to walls or ceiling. Care must also be taken not to expose fingers or thumb where there is possibility of injury. Some of the best and safest mediums are advertised in PHOTO-ERA.

For most subjects better results are obtained if a diffusing-screen is used between the flash and the sub-



ject photographed. It is a conservation of light to use a reflector behind the flash as well.

Sometimes a flashlight is the solution of seemingly impossible interior problems. Perhaps one has a small room to photograph, which is illuminated by only one window and that must be included in the picture. If taken by daylight it would require a deal of skill in manipulation to obtain clear detail in the shadows with no halation about the window, but taken in the evening with a flash these problems will all disappear, and the illumination can be placed wherever it seems desirable to the operator. Some difficulty may be met with in focusing in the evening, but this can be accomplished by the aid of a candle, and, if available, a friend to carry it about from one point to another, that the limits of the space included may be determined as well as the sharpness of definition. When one must get on without the ground-glass, the distance should be measured accurately and a rather small stop used to ensure the necessary depth of focus.

In taking interiors for entry in any contest, attention must be paid to composition and the arrangement of the furniture. Here, as in all pictures, there should be a center of interest, and simplicity should characterize the composition. In a home-interior it is probable that either a fireplace or a pleasant window will be the center of attraction, though it might be a piano, especially if it be a "grand," and other indications of musical activity can be used as accessories. Whatever is chosen as the *raison d'être*, let it have the best illumination and be given that position in the picture-space which will give it most prominence. This done, so arrange the other furnishings of the room that they shall lead the eye to the main interest rather than detract from it. In planning the arrangement of an interior to be taken by flashlight, it is well to place a lamp or other illumination in the place where the flash is to be used, that the direction of the light may be allowed for in placing the objects. Be sure that no near-by chair or table is cut in half by the margin of the print. Better all in or all out. If there are any artificial lights in the room, not included in the range of vision, they are better left burning, as they help to break up too strong shadows. In fact, if such are not available, it is often wise to use a second flash, very much smaller than the main one, and at the other side of the camera, to lighten the strong shadows cast by an unscreened flash. If a diffusing-screen is used, this is seldom necessary.

In taking groups of people in the evening, it is very important that the room be light, as otherwise the pupils of the eyes are greatly dilated to adapt the vision to the darkness, and the result of the sudden blinding flash is a startled expression, even when there is in reality no feeling of nervousness felt by the sitter. Especially with young children, this sudden transition from darkness to bright light should be guarded against, because of the possibility of injuring the eye. The best results are seldom obtained, in any circumstances, by directing the eyes toward the flash. Better turn them a trifle to one side, thus avoiding the strong catchlight in the center of the pupil, that is bound to be displeasing.

The cozy feeling of the fireside is greatly enhanced by representing the room as lighted by its glow. This is accomplished by using a flash in the fireplace. As halation would almost inevitably result from the unshielded flash, it is better to place a figure or piece of furniture between it and the lens, or else choose a position so far to one side that the side of the fireplace cuts off a direct view of the fire. The magnesium-ribbon is a safe light to use in such work, and a very convenient one as well. A piece of ribbon the desired length can

be arranged in the fireplace with a piece of string tied to one end as a slow fuse, the fuse lighted, the shutter opened and the exposure made without trouble. The ribbon is also easily used in effects of candle-light or lamplight.

The success of artificial light-effects is to a large extent dependent on the printing-medium used, as one associates so intimately with all such scenes the orange quality of the light, and much of the illusion is lost when it is reproduced by cool tones.

There are several ways to produce the reddish tones, the ideal one being a red or chocolate carbon on an orange support. Possibly the next best is the use of a dye that gives a stain to the whole print. The trouble with toning prints with uranium or similar agents is, that the highlights are the parts that we want tinted, and they are less affected by such methods than are shadows.

Straight portraiture by flashlight may be very acceptably done in the home by the use of a screened light, such as the portable skylight, and judicious use of reflectors. Dr. Nathan T. Beers has an excellent series of portraits taken by means of an ingenious arrangement, using a white umbrella as a diffusing-screen. These were published in PHOTO-ERA for December, 1911.

Owing to the tendency to strong contrasts in flashlight work, it is best to use a dilute developer for the plates and a soft-working paper for the prints.

KATHERINE BINGHAM.

### Printing Facsimile Signatures on Photographs

THE usual method of putting written signatures on photographic prints is by writing on a sheet of tracing-paper or thin celluloid film, which is then placed between negative and sensitive paper so that the writing is produced in white on the prints. This has always struck me as being but a makeshift, and the results are seldom really satisfactory in appearance, while obviously the method cannot be used on vignettted sketch pictures at all. Copying in the camera a written name for subsequent printing-in is by no means a simple method, but an equally perfect result can be got by an infinitely easier procedure.

If it is a pen-written signature that is to be reproduced, it is written on a bit of fixed-out dryplate or roll-film, preferably with opaque color or India ink, while if a pencil-effect is desired, such as professionals use on sketch-work, it is written on ground-glass, and it is essential that the pencil used should be a soft black one, however delicate the depth of the final result is to be. This is because one has to get a reasonable amount of opacity in the writing which an ordinary U B will not give. If the ground-glass is rather coarse, so much the better, as the pencil-line will have a certain "texture" which will assist the effect of verisimilitude in the final results.

The next thing is to put the signature in contact with a slow process- or lantern-plate in a printing-frame, and give a brief exposure which on development will give fair density with little or no veiling of the lines. It is not often necessary to reduce and then intensify, as in the case of ordinary line-negative making, and it will generally preserve the character of the writing better if this can be avoided. Only a small bit of plate is needed for each signature, as each one can be fixed with lantern-slide binders in a small hole cut in a suitable position in a piece of card. When printing these signature-negatives onto bromide paper it is an advantage to fasten a piece of thin white paper on the glass side so as to soften the light considerably, other-



HAY-TIME

W. STELCIK

THIRD PRIZE — FIGURES IN LANDSCAPE

wise they are almost sure to be overexposed and to print up too boldly. For regular professional sketch-work I think printing-in the signature from a negative made as described will be found a good deal quicker than writing it in, and can be done by quite unskilled labor, which the latter certainly cannot.

D. CHARLES, in *The British Journal of Photography*.

#### Backing Plates with Paper

IN producing good, crisp negatives, free of fog or halation, backed plates often become an important factor. It would no doubt be of considerable advantage if all exposures were to be made upon backed plates, as halation, more or less apparent, is generally present with the glass-plate negative. When only an occasional use of such plates, for special work, is found desirable, it may be of interest to note that very good results may be had by the simple expedient of placing in contact with the back of the sensitized plate a piece of black paper which has been moistened in glycerine. It serves the same purpose as when applying some backing-preparation which is subsequently removed from the plate, after exposure, with more or less trouble and perhaps some danger to the emulsion. In the use of the paper the only precaution is simply to secure good contact over the entire surface of the glass plate, and when ready for development the backing is stripped without any wetting of plate previous to developing — held by many to be the better plan.

I select a paper such as comes packed with the plates, with a good matte surface and cut a little smaller than the plate, as the paper swells with wetting. These sheets are first placed in the glycerine until well saturated, and then removed and allowed to dry. One of these is next placed in position on the back of the sensitized plate and the glycerine applied evenly to the

outside surface of the paper, care being taken that none reaches the emulsion side. Rub in contact with the fingers and set aside until surface-dry. This second application readily penetrates the paper and in my hands gives the desired contact. If it is attempted to lay the wet paper directly upon the glass, innumerable small air-bells are formed, owing, I presume, to the thick, heavy constituency of the glycerine. It might be well to try this process first with a piece of clear glass in order to observe the results. When in proper contact the paper, as seen through the glass, should look jet black throughout and free of air-bells. When loading the holder, any possible staining may be prevented by placing a fresh, dry piece of paper under the plate. The backing-paper can be preserved and used several times.

Written descriptions of anything, if explicit, sometimes seem too much for the reader's comprehension or too bothersome, while, as a matter of fact, quite easy to execute. This suggested backing is quite simple, easy and inexpensive, and if the weather is not too warm, will keep in good working-condition a surprisingly long time when locked in the holder away from air-currents. Its principal application, however, is for work ready at hand.

CHARLES A. HARRIS.

#### Clock-Parts for Cameras

REPAIRING a camera recently, I was greatly helped by finding numerous small screws, springs, etc., parts of an old broken clock, which came in very useful. It is well to keep any small mechanism of the kind, which has become useless for its original purpose, as from a collection of odds and ends of that sort one can often find something which will serve, when otherwise it might be quite a job to get what is wanted.

R. G. PAINE, in *Photography and Focus*.





# THE CRUCIBLE

A MONTHLY DIGEST OF PHOTOGRAPHIC FACTS  
*With Reviews of Foreign Magazines, Progress and Investigation*  
 Edited by PHIL M. RILEY



## Glazing Photographic Prints

SUCCESS when glazing photographic prints can only be obtained by one taking an old proverb and slightly modifying it to its application in this matter—i.e., "Cleanliness is next to success." Without cleanliness one is simply courting failure.

There are three satisfactory methods of glazing prints: first, by coating with a film of collodion; second, by using a waxing-solution either upon ferrotype or glass plates; and third, by the thorough cleaning of a sheet of polished plate glass, such as a mirror or old glass shelving, or even the backs of old negatives of a large size, with French chalk or talcum-powder. For most purposes the collodion process would be too expensive to work except on a very large wholesale scale, such as in the case of trade-printers, etc.; but for the average professional man or photographic dealer who specializes in prints for amateurs, either of the following methods can be relied upon and will be found easy to use.

First, I will deal with the waxing-question. The best solution I have found has been either the Autotype waxing-solution as used for carbon-work, or as made up to the following formula:

Paraffin wax, pure ..... 80 grains  
 Benzene (benzole), pure..... 4 ounces

Should neither benzene nor benzole be obtainable, pure rectified spirits of turpentine can be used, although I have always found that benzene or benzole are more satisfactory in use. The paraffin-wax should be cut up into very fine flakes and placed in a large-mouth 8-ounce bottle with 4 ounces of the liquid. This now requires vigorous shaking until the whole of the wax has dissolved and mixed into the solution. Once dissolved, and with an occasional shaking, it will always be ready for use. This mixture is applied by moistening a piece of soft fluffless flannel or other soft material with a few drops of the solution, rubbing the pad all over the ferrotype or wax plate, finally polishing with a soft dry cloth, leaving practically next to nothing upon the plate. Stand aside for about a quarter of an hour for the plates to become thoroughly dry; they are then ready for use.

The washed prints, before their final washing, should be treated to a bath of formaline 1 ounce to 24 ounces of water, or powdered alum may be substituted for the above in proportion of 4 ounces to 60 ounces of water. The formaline-bath is to be preferred, however, as it seems to improve the glaze a good deal. Float the prints on the glass under water in the usual way, lay an old piece of white backing-rubber (as used in printing-frames), or a piece of Autotype final transfer paper, coated side up, over the backs of the prints, and squeegee in the usual way with a flat carbon-squeegee, finally standing up to dry.

To remove prints after they are dry, wet the back with water and drain; then wet once again, draining them till they are surface-dry, lift up one corner with a penknife and strip gently. This method produces a very fine effect with P. O. P. prints toned in the sulphite-sulphocyanide bath to a warm red, if they are squeegeed out an ordinary carbon-opal instead of glass.

Another satisfactory method is to treat prints in the formaline or alum bath, as previously described, and squeegee them down on glass previously prepared by cleaning thoroughly with petrol, to remove all traces of grease, finally polishing with French chalk in the usual manner. As a substitute for petrol, the following mixture will be found A1 for the primary cleaning of glasses:

Precipitated chalk..... 1 ounce  
 Methylated spirits ..... 3 ounces  
 Water..... 6 ounces

Mix well together in a bottle, the cork of which has a small slit cut in one side to act as a sprinkler. Sprinkle a few drops of this preparation on a glass, clean well all over with a soft cloth, finally polishing with a dry duster, after which polish again with French chalk in the usual manner. Float the hardened and wetted prints on a glass under water, squeegee and stand to dry in a fairly warm place, but never in the sun, as this will melt the gelatine and cause them to stick forever. When dry, if the glasses have been properly prepared, the prints treated by this last method should drop off by themselves.

P. O. P. or bromide paper, which has been cut with a paper-knife, and has somewhat of a ragged or rough edge, has a tendency at times to cause prints to stick to their glazing-bases. In practice I always make it a rule to trim the edges of all prints quite clear and clean before toning or developing, as the case may be. From time to time, say once a month, if you are using the glasses very much, it is advisable to give them a thorough washing in hot soap and water to which a little soda has been added. Rinse well in clean cold water, and dry with a chamomis-leather and cloth. This operation is necessary to remove traces of grease which will accumulate after awhile through the touching of the polished surfaces with the bare hands, etc. Any of my brother professionals who have experienced difficulties in the past (and well I know what they are) will find any one of the methods described above quite satisfactory and reliable.

B. F. WELCH, in *The British Journal of Photography*.

## Effect of Humidity on Photographic Films

AFTER a plate has been exposed in a telescope for some time it gradually loses some of its sensitiveness. This action is the subject of a communication to the *Astro Physical Journal*, in which the cause of the decrease of sensitiveness is laid to the charge of humidity. Experiments were made to determine the effect of varied degrees of humidity on the sensitiveness and developing factor of a Seed 23 and a Seed 30 plate. Experimenting within the range of 0.5 to 85 percent of humidity, and allowing the emulsion film to come into equilibrium with the air, it was found that both sensitiveness and development factor decreased about 25 percent when the humidity has increased from 0.5 to 85 percent. This result seems very conclusive, and shows the restraining action of a change of moisture on the sensitiveness of the film. It would follow, therefore, that all photographic materials used in photometric work should be brought into equilibrium with the atmosphere in which they are used.

HONORABLE MENTION  
 FIGURES IN  
 LANDSCAPE



GOING HOME

E. D. LEPPERT

### Removing Pinatype Dye-Stain

THE prints can be easily reduced by placing them in water in which some glue has been dissolved (say an ounce of ordinary glue-solution to one pint of water). If it should be desired to remove the dye entirely, owing to reliefs being dyed the improper colors or otherwise, this is easily done by immersion in:

Potassium permanganate . . . . .	1 grain
Sulphuric acid conc. . . . .	5 minims
Water . . . . .	1 ounce

A subsequent wash, and, if necessary to remove the brown stain, a soak in sulphite solution, and the reliefs will be in condition to re-dye.

*The British Journal of Photography.*

### Rodinal Is Paramidophenol Solution

PARAMIDOPHENOL, one of those developers to which we have resorted because of the metal famine, comes to many younger photographers as a total stranger, whereas Rodinal is favorably known to many of them

as a universal developer for plates, films and papers. More experienced workers of an older generation, however, know that Rodinal is the trade-name for a popular liquid developer introduced by Andresen which consists of a highly concentrated solution containing paramidophenol. The following formula from *Chemische Zeitung* for making Rodinal will doubtless interest many workers:

Potassium metabisulphite or sodium sulphite . . . . .	3 parts
Paramidophenol . . . . .	1 part
Sodium hydrate (sat. sol.) . . . . .	q. s.
Hot distilled water . . . . .	10 parts

When the first two are dissolved in the water, add sodium hydrate solution very gradually until the precipitate first formed is dissolved and the solution becomes quite clear.

Complete instructions for the use of Rodinal for plates, films and lantern-slides, both in tray and tank, also for gaslight and bromide papers, will be found in PHOTO-ERA for April, 1914, page 201.





# BEGINNERS' COMPETITION



Closing the last day of every month  
Address all prints to PHOTO-ERA, Round Robin Guild Competition  
383 Boylston Street, Boston, U. S. A.

## Prizes

*First Prize:* Value \$5.00.

*Second Prize:* Value \$2.50.

*Third Prize:* Value \$1.50.

*Honorable Mention:* Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

A certificate of award, printed on parchment paper, will be sent on request.

*Subject* for each contest is "*Miscellaneous*"; but only original prints are desired.

Prizes, chosen by the winner, will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

## Rules

1. This competition is open only to members of the Round Robin Guild. Membership, however, is free to all subscribers; also to regular purchasers of PHOTO-ERA on receipt of their name and address, for registration, and that of their dealer.

2. All Guild members are eligible in this competition provided they never have received a prize from PHOTO-ERA other than in the Beginners' Class. Any one who has received only Honorable Mention in the PHOTO-ERA Advanced Competition still remains eligible in the Round Robin Guild Beginners' Competition; but upon winning a prize in the Advanced Class, one cannot again participate in the Beginners' Class. Of course, beginners are at liberty to enter the Advanced Class whenever they so desire.

3. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. *Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.* Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P., or black-and-white paper having the same gradations and detail.

4. *Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data. Criticism on request.*

5. *Each print entered must bear the maker's name, address, Guild-number, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what contest it is intended.*

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit being given.

7. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with *double thicknesses of stiff corrugated board, not the flexible kind, or with thin wood-veneer.* Large packages may be sent by express very cheaply and with indemnity against loss.

## Awards — Beginners' Contest

Closed August 31, 1916

*First Prize:* Samuel P. Ward.

*Second Prize:* T. D. Fields.

*Third Prize:* Louis R. Murray.

*Honorable Mention:* Mrs. Margaret Anderson, E. J. Brown, Halvor A. Caum, Foster Lardner, T. W. Lindsell, Elizabeth B. Wotkyns.

Special commendation is due the following workers for meritorious prints: Susan W. Adams, Frederick C. Buchholtz, E. E. Dewhurst, T. D. Fields, Philip L. Levy, Irving S. Lovelace, Donald MacGregor, S. Alton Ralph, Harold Sherer, M. C. Still, Walter G. Willis.

## Why Every Beginner Should Compete

THE trouble with most competitions is that they place the beginner at a disadvantage. If advanced workers be allowed to compete, beginners have little chance to win prizes, and so quickly lose interest after a few trials.

There are two monthly competitions in which prints may be entered, with prizes commensurate with the value of the subjects likely to be entered. They are: The Round Robin Guild Competition and the PHOTO-ERA Competition. The former is the better one for a beginner to enter first, though he may, whenever it pleases him, participate in the latter. After having won a few prizes in the Beginners' Class it is time to enter prints in the PHOTO-ERA Competition for advanced workers.

As soon as one has been awarded a prize in the PHOTO-ERA Competition, he may consider himself an advanced worker, so far as PHOTO-ERA records are concerned, and after that time, naturally, he will not care to be announced as the winner of a prize in the Beginners' Class, but will prefer always to compete in the PHOTO-ERA Competition for advanced workers. In accordance with this natural impulse, it has been made a rule by the Publisher that prize-winners in the Advanced Class may not compete in the Beginners' Class.

To measure skill with other beginners tends to maintain interest in the competition every month. Competent judges select the prize-winning prints, and if one does not find his among them there is a good reason. Sending a print which failed to the Guild Editor for criticism will disclose what it was, and if the error be technical rather than artistic, a request to the Guild Editor for suggestions how to avoid the trouble will bring forth expert information. The Round Robin Guild Departments, including those of personal counsel and criticism, form an endless chain of advice and assistance if members will connect the links.

## Restoring Faded Intensification

WHEN a negative which has been intensified with mercury to increase its printing-density is found to have turned to a yellowish color after a considerable time, it can be restored by soaking it in plain water for a little while, and then applying a weak solution of sodium or ammonium sulphide, such as is used for sulphide-toning. After this has caused a thorough blackening of the image, the negative is washed in a few changes of water and dried. This treatment makes the intensification quite permanent.

*Photography and Focus.*



# THE ROUND ROBIN GUILD

An Association of Beginners in Photography  
Conducted by KATHERINE BINGHAM



*This association, conducted under the auspices of PHOTO-ERA, and of which PHOTO-ERA is the official organ, is intended primarily for the benefit of beginners in photography. The aim of the association is to assist photographers by giving them information, advice and criticism in the Guild pages of PHOTO-ERA and by personal correspondence. Membership is free to subscribers and regular purchasers of the magazine sending name and address to PHOTO-ERA, The Round Robin Guild, 383 Boylston Street, Boston, U. S. A.*

## Judging the Quality of the Negative

THE "Ideal Negative" is a "Will o' the Wisp," defined so variously that the more the beginner reads of its desirable qualities the more chimerical it seems. As the "proof of the pudding is in the eating," so the proof of the negative is the print it yields. This being the case, the ideal negative will differ somewhat according to the printing-medium that is to be used and the quality of the print desired.

The rather thin, somewhat flat plate that yields a print of atmosphere and pictorial quality, and is the joy of the artist-photographer, would be thrown away as a total failure by the commercial worker, whose ideal is a sharp, clear plate filled with contrast and detail. There is a sort of happy medium, however, that will yield a good print on almost any paper, and for the beginner this is a good target at which to aim. Having acquired the skill necessary to make this kind of negative, he can then vary the quality as he finds necessary, to suit his personal requirements.

In general, the average plate should not be so dense that it must be held against a strong light in order to see the detail; neither must it be so thin that detail is lost against a strong light. Held above a white paper that gives a good reflected light, it should show no clear glass in the shadows and no dense patches of black, without detail, in the highlights. There should be, however, a fairly long scale of tones from nearly clear glass up to fairly strong opacity. The color of the plate affects materially its printing-quality—a bluish tone giving a flatter print, whereas a yellowish color lengthens the time of printing and gives greater contrast in the print.

If the plate under inspection shows rather dense, with no great contrast, but plenty of detail in the shadows, it has been overexposed; if very thin, but full of detail, underdevelopment is indicated. If, on the other hand, there is too great contrast, the shadows showing as clear glass while the highlights are very thick, underexposure, with its almost invariable accompaniment of overdevelopment, is the trouble. A moderate degree of underexposure and overdevelopment produces a beautiful negative to look at—brilliant and deceptively full of detail, for the resulting print is harsh, and, unless "dodging" is resorted to, it is next to impossible to bring out the detail in both highlights and shadow. Such a negative may often be greatly improved by reduction, but the thick negative that is lacking in contrast, and the one of extreme contrasts, and without detail in the shadows, are among those better accepted as hopeless, and sold for old glass.

The thin, detailful, underdeveloped plate is the one that is greatly improved by intensification. An overexposed plate that is thin may also be somewhat improved by this treatment.

With the present multiplicity of grades of developing-papers, almost any kind of negative can be made to yield a fairly satisfactory print; but if one's ambition is

to make ideal negatives, one should be content with nothing short of this goal.

Prints may also be made on cloth and utilized in a number of ways. Prints direct from flowers and ferns make very decorative designs for magazines or book covers, or may be made up into bags and things of that sort. The great objection to photographs on cloth is the exceeding blueness of the image. This may be toned to various colors; but how stable the results may be, I cannot tell. In PHOTO-ERA for November, 1915, the Guild Department has an article descriptive of a process for making platinum prints on cloth which yield a gray tone without after-manipulation. This should be available for all sorts of novelties, as well as for handkerchief-corners, pin-cushions, etc. One should be careful in the selection of subjects for such work. One would scarcely care to use a pin-cushion adorned with a visage of a friend. Neither would subjects depending on fineness of detail come out well in this medium.

After all, however, if one has some really fine subjects among his negatives, there is no more acceptable gift for a friend than a good enlargement properly framed. If a picture is good in composition, and represents an attractive subject, it will gain immeasurably by being shown in a large-sized print, and, if properly framed, it makes a gift to which one's friends will point with pride and pleasure.

The transparency is another form in which the subject may be shown; but it is not so easy to find a place to display a picture that must be seen by transmitted light. This is a drawback with the Autochrome and other color-plates.

Many are the ways, then, in which one's camera may help to decide the great question of "What shall I give?" In all forms, the acceptable gift is the product of careful thought and painstaking execution.

## The Camera as a Gift-Producer

THE ways in which one's camera-results may be utilized in the making of gifts for the coming holiday-season are almost innumerable. Perhaps one of the gifts most often made, and generally spoiled in the making, is a book of views.

If one has been on a trip or spent a vacation in company with friends who do not own a camera, a book of the pictures taken would be a very acceptable gift. However, as one thinks over the books of the sort that one has seen, how many, I wonder, can be remembered with any particular pleasure. Are they not as a rule a motley collection of poorly trimmed prints of varying shades, either mounted all over on thin paper, resulting in curled leaves, or stuck insufficiently at the corners so that one or more corners become detached and the print gets folded and creased? Slipshod work is never acceptable, and in gift-making, especially, is to be deplored.



An "infinite capacity for taking pains" is the secret of success in all processes photographic. If a book of views is to be made, the negatives should be selected carefully, looked over for pinholes or other defects, and, if possible, all prints made at the same time and of as nearly the same shade as possible. When the prints are dry, they should be trimmed accurately; but no effort should be made to have them of the same size, as often a print is improved greatly by removing an inch or two of uninteresting foreground, or a bit of fence or obtruding branch, or other object from one end. Sometimes an oval or circle will be a better shape to use than the rectangle. The leaves for the book should be of sufficient thickness to hold their shape, and of a shape and size to give a suitable margin for the largest prints. In color, they should harmonize with the print. For brown prints, a medium shade of brown mount is good, and gray prints should have a quiet shade of gray for a background. Prints should be mounted all over with dry mounting-tissue, or they may be tipped at the corners with glue, not paste. In whatever way they are mounted, they should be done neatly — margins even and no glue on print or mount. They should be kept under pressure until thoroughly dry in order to prevent curling. A cover of some lighter-weight paper may be appropriately lettered, and the whole tied with cord.

If a more elaborate book is desired, the ideal way is to use a mask or even the double-printing method. In this way, the picture is printed directly on the leaf and the margin then tinted. To do this, the paper must be double weight and cut the size that the book is to be. The negative is printed through a mask in which process the margin is left white. If a dark margin is desired, a second printing is resorted to in which the print is protected from the light, and a short exposure of the remaining paper tints it deeply or slightly, according to the length of time it is exposed. Accurate record of the time of exposure for the margin should be kept, so that all may be of the same shade. A good way to finish a book of this sort is to fasten the leaves back to back with mounting-tissue, and to use a heavy cardboard for the cover, fastening a ribbon or tape to the front edges so that the book may be tied together, thus preventing the leaves from warping.

But books are only one of many forms in which prints may be utilized. Of course, the market is always overstocked with calendars; but they are a necessity and, if well gotten up, are always acceptable. One of the best forms is that in which four leaves are used, one for each of the four seasons, with a view on each appropriate to the months represented, though the very small standing calendar for the desk is pretty sure to find a place for itself, because of its smallness and convenience.

### Enlarging Without a Lens

DR. A. J. LOTKA communicated to the American Physical Society recently a curious method which he had worked out, acting on an accidental observation, for making enlargements by contact-printing — a thing which at first sight would seem to be quite impossible. Yet, like many other devices, it is seen to be simple enough when once the method is explained.

The plan consists, briefly, of making a print from a negative by employing a very narrow slit as the light, screening this so that only a narrow strip of the negative is printed at once. The negative is moved past the slit, so that each part of it is exposed in turn. While this is going on, the paper is moved past the negative with a velocity bearing some definite relation to the speed of the negative. The result is a print sharp and

clear in one direction, but with all the lines in the direction at right angles thereto, drawn out in some fixed ratio.

This print is then used to provide a fresh negative by a repetition of the process; but in this repetition the motion of the slit and of the paper is at right angles to the first, so that lines which were drawn out in the first case are left unaltered, while lines at right angles to them are drawn out. This second negative being enlarged in the opposite direction to the first, the result of the two enlargements is a new negative, which itself is enlarged but undistorted.

*The Scientific American* gives some examples of enlargements made in this way, and it is very interesting to see how the result of the first process, which is to give an almost irreducibly distorted picture, when itself submitted to the process in the other direction, gives an undistorted enlargement. Whether there will ever be any practical application of the invention it is too soon to say; it is sufficient at present to know that such a process can be worked at all. The same paper gives the circumstances which led up to it, in the inventor's own words, thus:

"One morning as I was stropping my razor I observed a peculiar effect. On the hollow-ground back of the razor is an inscription, 'Our Best Make.' As the blade moved over the strop I noticed a peculiar distortion of the characters, which appeared something like this: 'Our Best Make.' I wondered what could be the explanation of this. Persistence of vision could not account for it, for that would merely cause a blurring of the letters. Then I reflected that, owing to the cylindrical curvature of the hollow-ground blade, there was reflected back to the eye at any moment only a narrow band of light (my back being turned to the window). Furthermore, as the razor moved along, a different portion of it from instant to instant appeared brightly illuminated. As the inscription on the razor was in motion in a line oblique to its long axis, successive portions of it were revealed to the eye in different positions, with the result of causing the inscription to appear, owing to persistence of vision, as one whole, but with its several portions rearranged in accordance with the character of the motion. Then I began to wonder how I could prove the correctness of my explanation; and in pondering over the experimental means that might be employed to demonstrate this I was finally led to the process."

*Photography and Focus.*

### A Tripod Base for Copying-Work

THE object sought in the following will not be in the way of any new or original suggestion, but merely to jog the memory and perhaps be the means of preserving a sweetness of temper when some particularly trying piece of copying-work is on the tapis. It is easy to imagine a situation when one has, with considerable adjustment of the tripod, secured a level condition of the camera before his copy, only to find that the camera must be raised or lowered, moved sideways, backward or forward, after either of which the instrument must again be leveled, when possibly this leveling process will put some factor out of gear — and so on. This is sometimes enough to bring beads of perspiration to a noble brow. Then if added to this the operator may be tall, with a tripod of such a height that he is perforce obliged to bend his back while using the ground-glass, he will surely have a crick in his neck before the job is completed. For myself I remedied all this by first cutting three pieces of wood, say two to three inches square, and of sufficient length to raise the camera so that it would be convenient to operate



THE LITTLE BLOND JAP

SAMUEL P. WARD

standing erect. Then prepare three strips of  $\frac{3}{8}$ -inch material from twenty-six to thirty inches long, and screw the overlapping ends of these to the ends of the three blocks mentioned. This forms a triangular frame resting upon the supporting blocks. When not in use one of the screws may be removed and the frame folded compactly. At each of the intersecting ends make holes with an awl, into which the steel points of the tripod are inserted. These must be spaced evenly. Screw-eyes are then fastened in the frame near these points and a strong cord tied between the joint of the lower section of the tripod and these screw-eyes. In this way the tripod and base are securely joined, and as the three legs are spaced at even distances, the camera will be level. The latter is raised and lowered by a corresponding adjustment in the length of the tripod without removing from the base, and with the foot the whole thing can quite readily be shifted in any lateral direction. With a small outfit and a lightly constructed base it is not at all inconvenient to pick up the camera with base attached and carry it about the house. Anything in the way of casters will be unnecessary, except

in the case of a very heavy apparatus such as a studio-equipment, which we are not now considering. This triangular base can be made of course to serve individual requirements, and besides use in copying it will be of value when working upon marble floors or upon highly polished floors when the tripod may injure the same or when rugs are inclined to slip about.

CHARLES A. HARRIS.

THE Greek architects, observing that the horizontal architrave surmounting the columns of their temples appeared to sag, corrected the fault by giving their architrave a slightly upward arch, thus by means of a curve securing a straight line; or at least a line which was architecturally and visually straight. Here then clearly lies the division-line between science and art — the one gives us actual truths, the other visual truths; the one facts, the other moods, impressions, visions; each in its place admirable, each ministering to one of the two great needs of humanity, the physical and the spiritual.

BIRGE HARRISON, in "*Landscape-Painting.*"





## ANSWERS TO QUERIES



Subscribers and regular readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Correspondence Department, PHOTO-ERA, 383 Boylston Street, Boston, U. S. A. If a personal reply is desired, a self-addressed, stamped envelope must be enclosed.

**A. T. N. — Gaslight prints of varying degrees of softness** may be had by varying the printing-distance. The nearer the printing-frame is to the light, the softer the print, and *vice versa*; but do not attempt to print at a distance nearer than the diagonal of the printing-frame. The practical application of this fact is to print dense negatives nearer and thin negatives farther away from the light, remembering that the printing-time varies with the square of the distance. In other words, if the distance is halved, the exposure is only one-fourth as great, while if the distance is trebled, the exposure is nine times as great.

**D. R. E. — Yellow stains on negatives** rarely occur when an acid fixing-bath containing chrome alum is used. It might be well to adopt it hereafter. To remove the yellow stains caused by pyro or hydroquinone developer, immerse the negative in the following:

Water .....	10 ounces
Iron sulphate.....	1½ ounces
Sulphuric acid.....	½ ounce
Powdered alum.....	½ ounce

**L. P. D. —** You are quite correct. **Rodinal** is a concentrated solution containing paramidophenol. It keeps well not only in full bottles, but also in those that have been opened and partly used. Although in opened bottles Rodinal becomes darker in color, this change produces no noticeable effect upon the working-properties of the solution. When prepared for use by the addition of a large proportion of water, the keeping-qualities are not so good. After a few days the solution turns reddish, and gradually loses its developing-power. If it is desired to keep Rodinal in a diluted condition for a long time, use a 2.5- to 5-percent solution of sodium sulphite, anhydrous, for dilution instead of water.

Rodinal produces excellent negatives — clear, clean and of splendid gradation in highlights, middle-tones and shadows. The degree of contrast depends upon that of dilution. To develop, take 1 part Rodinal to 20 parts water, at a temperature of 60 to 65 degrees. For overexposures, reduce the water to 10 to 20 parts; for underexposures, increase the water to 20 to 40 parts.

For twenty-minute tank-development at 65 degrees, take 1 part Rodinal to 40 parts water.

For lantern-slides, use 1 part Rodinal to 30 parts water.

Negatives developed with Rodinal seem to lose density in the fixing-bath, and it is necessary to carry development a little further than appears to be required.

For bromide papers, take 1 part Rodinal to 100 parts or less of water. The resultant tone varies from a pleasing blue-black to a rich gray-black, and is dependent upon the proportion of water employed, strong solutions giving blue-blacks and weak solutions giving gray-blacks.

For gaslight papers, take 1 part Rodinal to 15 or 20 parts water, adding 3 drops of 10-percent potassium bromide solution to each ounce of developer working-solution.



NEVADA FALLS

T. D. FIELDS

SECOND PRIZE — BEGINNERS' CONTEST

**G. A. D. —** As to **judging the negative**, a correctly exposed and developed negative might be described as having ample detail with transparent shadows and splendid gradation; a correctly exposed and underdeveloped negative as full of detail but lacking in density; a correctly exposed and overdeveloped negative as full of detail but too contrasty, with dense highlights; an underexposed and correctly developed negative as lacking in shadow-detail; an underexposed and underdeveloped negative as still more lacking in detail and also lacking in density; an underexposed and overdeveloped negative as lacking in shadow-detail but too dense in the highlights; an overexposed and correctly developed negative as full of detail but foggy and flat; an overexposed and underdeveloped negative as full of detail but foggy and thin; an overexposed and overdeveloped negative as full of detail but very dense and foggy.

**L. P. T. — In selling a camera-equipment that is virtually new**, about 25 percent of the list-price must usually be sacrificed, unless the outfit can be sold to a friend who knows its real value and is willing to take it off your hands. In a recent list of second-hand goods issued by a reputable dealer an outfit like yours is listed at \$140, the cost being correctly stated at \$182.



## PRINT-CRITICISM



*Address all prints for criticism, enclosing return-postage at the rate of one cent for each two ounces or fraction thereof, to Correspondence Department, PHOTO-ERA, 383 Boylston Street, Boston, U. S. A. Prints must bear the maker's name and address, and be accompanied by a letter, sent separately, giving full particulars of date, light, plate or film, stop used, exposure, developer and printing-process.*

H. A. M.—The only possible objection in your pretty picture along the Riverway is the branch which droops down into the center of the picture. It appears a trifle obtrusive. The picture is decorative in character, therefore the author is allowed certain liberties. The way this branch hangs down divides the sky-portion into two parts. By trimming the print at the top and bottom, and the left, the pictorial arrangement will be much improved. As the negative appears to be quite sharp, you will be able to make an enlargement of the newly created picture that will please you.



THE DAY IS LOWERING

LOUIS R. MURRAY

THIRD PRIZE — BEGINNERS' CONTEST

H. H.—Your print number 1 can be much improved by trimming so as to remove some of the conspicuous background at the left; take off all of the left-hand trellis. Number 2 is an attractive composition, well spaced. The right-hand side, however, seems to be lower than the left, but this is easily remedied in the printing. Number 3 is several shades too light. A darker print would give better facial expression and texture in the child's dress; the background would likewise be improved. Number 4 is of interest only to the persons concerned. It is noticeable that the camera was far from being level, as shown by the water-level line.

W. W. D.—By placing the horizon-line and the figures very near the top of the picture-space you have emphasized the height of the mountain and the great depth of the canyon beneath. "On Mesa Grande" can be improved, however, in the printing by the use of a soft-working paper, which will render shadows less intense and bring out better the detail in the faces.

P. L. L.—Had you swung your camera somewhat to the right your photograph of "The Garden in the Park" would have been better spaced, the fountain now being too near the edge of the print, and the prominent trees in the background too near the center from left to right.

Overdevelopment has given too white a sky and path. Reduction of the negative or the use of a soft-working paper would yield a more harmonious print.

S. A. R.—Your "Study in Animation" is one of those subjects of interest to the immediate family, and the same is true of "Day-Dreams." The former is unfortunate in its background, which is emphasized and distorted by being so badly out of focus, while the squinting face of the child is emphasized by heavy shadows which invariably occur when portraiture is attempted in strong sunlight. Of course, "Day-Dreams" is badly undertimed and forced in development, the result being a swarthy complexion and chalky trees.

F. L.—Your postcard-prints are technically excellent; the spacing of the composition is good. "Through the Birches," of course, is chiefly a decorative effect of the trees, and would have been improved by a darker sky.

"Lights and Shadows" has attractive lights, and the principal trees are well spaced. A slightly longer exposure would have yielded more transparent shadows and a better effect of sunlight. Perhaps this can be obtained from the present negative by a soft-working paper. Trimming the very light leaves from the bottom will also prove beneficial.

"Mother's Pride," of course, is one of those subjects which interest members of the immediate family.

C. P.—The picture of a little child is very well done, except the ton-values — the fleshtints, which are as dark as those of a full-blooded negro-child. The picture is in too low a tone to be thoroughly pleasing. A lighter print would be more satisfactory.



# Photo-Era Exposure-Guide

Calculated to give Full Shadow-Detail, at Sea-Level, 42° N. Lat.

For altitudes up to 5000 feet no change need be made. From 5000 to 8000 feet take  $\frac{3}{4}$  of the time in the table. From 8000 to 12000 feet use  $\frac{1}{2}$  of the exposure in the table.

Exposure for average landscapes with light foreground, river-scenes, light-colored buildings, monuments, snow-scenes with trees in foreground. For use with Class 1 plates, stop F/8, or U. S. 4. For other plates, or stops, see the tables on the opposite page.

\*These figures must be increased up to five times if the light is inclined to be yellow or red.

†Latitude 60° N. multiply by 3;

55° × 2; 52° × 2; 30° ×  $\frac{3}{4}$ .

‡Latitude 60° N. multiply by 2;

55° × 2; 52° ×  $1\frac{1}{2}$ ; 30° ×  $\frac{3}{4}$ .

§Latitude 60° N. multiply by  $1\frac{1}{4}$ ;

55° × 1; 52° × 1; 30° ×  $\frac{1}{2}$ .

§Latitude 60° N. multiply by  $1\frac{1}{4}$ ;

55° × 1; 52° × 1; 30° ×  $\frac{1}{2}$ .

## MONTH AND WEATHER

HOUR	JAN., NOV., DEC. †					FEB., OCT. ‡					MAR., APR., AUG., SEPT. §					MAY, JUNE, JULY §				
	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull
11 A.M. to 1 P.M.	$\frac{1}{32}$	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{32}$	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{50}$	$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{1}{60}$	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$
10-11 A.M. and 1-2 P.M.	$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{40}$	$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{2}$	$\frac{1}{60}$	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$
9-10 A.M. and 2-3 P.M.	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{2}{3}$	1*	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	1*	$\frac{1}{10}$	$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{2}$	$\frac{1}{50}$	$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$
8-9 A.M. and 3-4 P.M.						$\frac{1}{5}$	$\frac{1}{2}$	1*	1*	3*	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{3}$	$\frac{1}{2}$	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$
7-8 A.M. and 4-5 P.M.											$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{3}$	$\frac{2}{3}$
6-7 A.M. and 5-6 P.M.											$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1*	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$
5-6 A.M. and 6-7 P.M.																$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{3}$	$\frac{2}{3}$	$1\frac{1}{2}$ *

The exposures given are approximately correct, provided the shutter-speeds are accurately marked. In case the results are not just what you want, use the tables merely as a basis and increase or decrease the exposure to fit the conditions. Whenever possible keep the shutter-speed uniform and vary the amount of light when necessary by changing the stop. Focal-plane shutters require only one-third of the exposures stated above.

**SUBJECTS.** For other subjects, multiply the exposure for an average landscape by the number given for the class of subject.

**1/8 Studies of sky and white clouds.**

**1/4 Open views of sea and sky;** very distant landscapes; studies of rather heavy clouds; sunset- and sunrise-studies.

**1/2 Open landscapes without foreground;** open beach, harbor- and shipping-scenes; yachts under sail; very light-colored objects; studies of dark clouds; snow-scenes with no dark objects; most telephoto-subjects outdoors; wooded hills not far distant from lens.

**2 Landscapes with medium foreground;** landscapes in fog or mist; buildings showing both sunny and shady sides; well-lighted street-scenes; per-

sons, animals and moving objects at least thirty feet away from the camera.

**4 Landscapes with heavy foreground;** buildings or trees occupying most of the picture; brook-scenes with heavy foliage; shipping about the docks; red-brick buildings and other dark objects; groups outdoors in the shade.

**8 Portraits outdoors in the shade;** very dark near objects, particularly when the image of the object nearly fills the plate and full shadow-detail is required.

**16 Badly-lighted river-banks,** ravines, glades and under the trees. **Wood-**  
**48 interiors** not open to the sky. **Average indoor-portraits** in a well-lighted room, light surroundings.

**PLATES.** When plates other than those in Class I are used, the exposure indicated above must be multiplied by the number given at the head of the class of plates.

# For Perpetual Reference

For other stops multiply by the number  
in the third column

## Example

As all the figures in the table opposite are based upon the use of stop F/8, or U. S. 4, it does not appear here among the ratios for other stops.

U. S. 1	F/4	× 1/4
U. S. 2	F/5.6	× 1/2
U. S. 2.4	F/6.3	× 5/8
U. S. 3	F/7	× 3/4
U. S. 8	F/11	× 2
U. S. 16	F/16	× 4
U. S. 32	F/22	× 8
U. S. 64	F/32	× 16

The factors that determine correct exposure are, first, the strength of light; second, the amount of light and dark in the subject; third, speed of plate or film; fourth, the size of diaphragm used.

To photograph an average landscape with light foreground, in Feb., 2 to 3 P.M., bright sunshine, with plate from Class 1, R. R. Lens, stop F/8 (or U. S. 4). In the table look for "Hour," and under the column headed "Bright Sunshine," note time of exposure, 1/16 second. If a smaller stop is used, for instance, F/16, then to calculate time of exposure multiply the average time given for the F/8 stop by the number in the third column of the table for other stops, opposite the diaphragm chosen. The number opposite F/16 is 4. Multiply  $1/16 \times 4 = 1/4$ . Hence, the exposure will be 1/4 second.

For other plates consult the table of plate-speeds. If a plate from Class 1/2 be used, multiply the time given for average exposure, F/8 Class 1, by the number of the class.  $1/16 \times 1/2 = 1/32$ . Hence, the exposure will be 1/32 second.

## Speeds of Plates on the American Market

Class-Numbers. No. 1, Photo-Era. No. 2, Wynne. No. 3, Watkins

Class 1/3, P. E. 156, Wy. 350, Wa.  
 Ilford Monarch  
 Lumière Sigma  
 Marion Record  
 Seed Graflex  
 Wellington Extreme

Class 1/2, P. E. 128, Wy. 250, Wa.  
 Ansco Speedex Film  
 Barnet Super-Speed Ortho.  
 Central Special  
 Cramer Crown  
 Eastman Speed-Film  
 Hammer Special Ex. Fast  
 Imperial Flashlight  
 Imperial Special Sensitive  
 Seed Gilt Edge 30  
 Wellington 'Xtra Speedy

Class 3/4, P. E. 120, Wy. 200, Wa.  
 Barnet Red Seal  
 Cramer Instantaneous Iso  
 Defender Vulcan  
 Ensign Film  
 Hammer Extra Fast, B. L.  
 Ilford Zenith  
 Paget Extra Special Rapid  
 Paget Ortho. Extra Special Rapid

Class 1, P. E. 111, Wy. 180, Wa.  
 American  
 Ansco Film, N. C.  
 Atlas Roll-Film  
 Barnet Extra Rapid  
 Barnet Ortho. Extra Rapid  
 Central Comet  
 Imperial Non-Filter

Imperial Ortho. Special Sensitive  
 Kodak N. C. Film  
 Kodoid  
 Lumière Film and Blue Label  
 Marion P. S.  
 Premo Film-Pack  
 Seed Gilt Edge 27  
 Standard Imperial Portrait  
 Standard Polychrome  
 Stanley Regular  
 Vulcan Film  
 Wellington Anti-Screen  
 Wellington Film  
 Wellington Speedy  
 Wellington Iso. Speedy  
 W. & W. Panchromatic

Class 1 1/4, P. E. 90, Wy. 180, Wa.  
 Cramer Banner X  
 Cramer Isonon  
 Cramer Spectrum  
 Defender Ortho.  
 Defender Ortho., N.-H.  
 Eastman Extra Rapid  
 Hammer Extra Fast Ortho.  
 Hammer Non-Halation  
 Hammer Non-Halation Ortho.  
 Seed 26x  
 Seed C. Ortho.  
 Seed L. Ortho.  
 Seed Non-Halation  
 Seed Non-Halation Ortho.  
 Standard Extra  
 Standard Orthonon

Class 1 1/2, P. E. 84, Wy. 160, Wa.  
 Cramer Anchor

Lumière Ortho. A  
 Lumière Ortho. B

Class 2, P. E. 78, Wy. 120, Wa.  
 Cramer Medium Iso.  
 Ilford Rapid Chromatic  
 Ilford Special Rapid  
 Imperial Special Rapid  
 Lumière Panchro. C

Class 3, P. E. 64, Wy. 90, Wa.  
 Barnet Medium  
 Barnet Ortho. Medium  
 Cramer Trichromatic  
 Hammer Fast  
 Ilford Chromatic  
 Ilford Empress  
 Seed 23  
 Stanley Commercial  
 Wellington Landscape

Class 5, P. E. 56, Wy. 60, Wa.  
 Cramer Commercial  
 Hammer Slow  
 Hammer Slow Ortho.  
 Wellington Ortho. Process  
 W. & W. Process Panchromatic

Class 8, P. E. 39, Wy. 30, Wa.  
 Cramer Contrast  
 Cramer Slow Iso.  
 Cramer Slow Iso. Non-Halation  
 Ilford Halftone  
 Ilford Ordinary  
 Seed Process

Class 100, P. E. 11, Wy. 3, Wa.  
 Lumière Autochrome





## OUR ILLUSTRATIONS

WILFRED A. FRENCH



ONE of the chief attractions of the portrait-exhibit at the convention of the Society of Professional Photographers of New York, last March, and which appears on the current cover of PHOTO-ERA and on page 225, was the portrait of a little girl, by Ira D. Schwarz. The composition is appropriately simple and unaffected, the expression bright and innocent and the treatment direct and refined. Data: November, 11.30 A.M.; 8 x 10 Sky-Scraper; 17-inch Telecentric lens; stop, F/5.6; window light;  $\frac{1}{2}$  second; H. P. film; M. Q. tank developer; 8 x 10 Cyko Plat.

The illustrations that accompany the paper by William S. Davis are in the happiest pictorial vein of that accomplished worker, and express in a convincing way their individual artistic application. Data: "The White Moon Climbs the Sky," frontispiece. August evening; exposure, 20 minutes, commencing 7.45 P.M.; stop, F/8; Inst. Iso. plate; moon just out of field of view during this exposure, after which camera was moved enough to include it in desired position, and another exposure of 20 seconds given for moon alone on same plate.

"The Rainbow," page 209. May, 5.30 P.M.; diffused light; some rain still falling; exposure, 1 second; stop, F/16; Ingento "A" ray-filter; Cramer Inst. Iso.; developed in M. Q., followed by bromo-hydro to obtain better contrast between rainbow and sky. This accounts for the landscape being rather hard.

"October Mists," page 210. Taken in thick fog, 8.15 A.M.; facing light;  $\frac{1}{10}$  second; stop, F/6.3; Wellington "Anti-Screen" plate.

"The Moonlit Road," page 210. February evening; considerable light from after-glow, which helped to soften deep shadows; exposure, 20 seconds for landscape, 5 seconds for moon alone, as previously described; stop, F/8; Cramer Inst. Iso.

"Wind-swept," page 211. November, 8.30 A.M.; looking east; heavy northwest wind;  $\frac{1}{50}$  second; stop, F/11; Cramer Inst. Iso.

"The Silver Crescent," page 211. November, twilight; clear; exposure, 15 minutes; stop, F/6.3 for house and trees; 10 seconds' separate exposure made on moon; Inst. Iso.

The occasional essays in the nude of Alfred W. Cutting have all been in the direction of mythological or allegorical subjects, and in this extremely difficult department of camera-work this artist has been strikingly successful. His exemplification of an idea is pleasingly suggestive, if not directly convincing, and his manner of expression eminently artistic and refined. These qualities are manifest in the "Sundial," page 216, a daring theme, but executed with high technical skill and in a purely artistic spirit. Data: July, 11 A.M.; cloudy and overcast; 8 x 10 Folner & Schwing camera; rear lens (22 $\frac{1}{2}$ -inch) of Voigtlander & Sohn Wide-Angle Euryscope, series VII, No. 5; used open; exposure, 1 second; 8 x 10 Stanley plate; hydro-metol; 8 x 10 American Platinotype print.

We are indebted again to artist Rabe for another characteristic and delightful souvenir of a well-known event. Page 220. The plate is exceptionally noble in design, and with a touch of the imaginative quality that distinguishes his pictures of the Panama-Pacific Exposition from many others I have seen. The water-

birds, in the foreground, present a pleasing foil to the substantial structure beyond. (For data our readers are referred to previous issues of PHOTO-ERA.)

The sea-piece, page 221, a vacation-picture by a PHOTO-ERA editor, shows the diversity of the lady's professional ability, and illustrates, if it may, her sound judgment in pictorial selection and technical knowledge. Data: 4 x 5 Cycle Graphic camera; 9-inch Struss Pictorial lens; stop, F/8; electric flashlamp; Wratten & Wainwright Panchromatic; pyro-acetone, tank; print on Etching Black Platinum; self-posed; shutter and flashlamp operated by foot on bulb.

Mr. Wright's sunset, page 234, makes its appeal to the pictorial sense by reason of its striking chiaroscuro. True, the shadows, one and all, are absolutely black, and there is no detail, no gradation. Nature not only abhors a vacuum, but an opaque shadow. Here everything was sacrificed to the sunset and its reflection in the river, and as these are rendered superbly, the picture has a reason for being. Data: September, 5 to 6 A.M.; B. & L. Platinotype lens, 13-inch; stop, U. S. 8;  $\frac{1}{25}$  second; 6 $\frac{1}{2}$  x 8 $\frac{1}{2}$  Inst. Iso.; 4 $\frac{1}{2}$  x 6 W. & C. Platinotype print.

The unusual military spectacle — a troop of cavalry in winding, almost vanishing, perspective, and moving slowly over a mountain-road and in the "enemy's" country — is presented on page 228. The setting is characteristic of Northern Mexico — rocky and arid, barren and forbidding. It is an impressive picture, this, and the composition stamps its author as an artist of quick perception and excellent judgment. No data.

As a sharp contrast to the happy, chubby face of the little girl, a few pages back, we behold the countenance of a pessimist — one whose affairs must be in a sorry plight. But won't you be astonished to learn that its owner is none other than a professional humorist — Bradford, the cartoonist! A self-portrait? Hardly; although Mr. Bradford has his troubles — professional, not domestic. He told us about some of them, and illustrated them, too, in August PHOTO-ERA. He is so imbued with the seriousness of his profession — to draw and write material by the yard, day after day, rain or shine — that he simply can't think of the coal-bill, the doctor's bill or the high price of living without a grin overspreading his face. Here, however, things may have gone wrong with the cook, and that is generally enough to upset almost any one. Mr. Bradford seems to be a successful amateur-impersonator. His own self in the character of a political critic (September PHOTO-ERA), and one or more humorous characterizations to follow in the near future, exemplify this successfully developed accomplishment. No data.

### Advanced Competition

THE subject, "Figures in Landscape," presents so many artistic possibilities that a large variety of entries was expected. This proved to be the case. It showed, however, that the themes of the most successful two pictures were very similar — a group of two boys each and at the edge of a pond! One of these entries, "There's One!" page 234, was awarded the first prize by reason of its originality. In excellence of

workmanship it is scarcely equal to the others that received official recognition, but in boldness of design and breadth of treatment it leads them all. Data: September 4; good light; 6½-inch Zeiss Kodak lens; stop, F/16; exposure,  $\frac{1}{10}$  second; Standard Ortho, 3¼ x 5½; pyro in tank; enlargement on Royal Bromide.

The group pictured in "Gamins," by our old friend, J. Herbert Saunders, page 235, is suggestive of fewer physical comforts than those that mark the preceding picture. Though the character of the scene — in England — is somewhat depressing, the landscape-setting is quite pictorial. The action and repose of the two figures are true to life, and the atmospheric quality of the picture is very admirable. No data.

As a complete and well-ordered composition, Mr. Stelcik's "Haytime," page 237, commands admiration. The placement of the team and its driver, the illumination of the figures, the atmosphere, quality and pictorial proportions — all betray the correct artistic instincts of this camerist. Data: July, 1916; bright light; 5 x 7 Conley camera; R. O. lens; stop, F/8; exposure,  $\frac{1}{100}$  second; Standard Ortho; pyro in tray; print on Azo A.

The most pleasing picture in this series — in many respects — emanates from Mr. Leppert, page 239. It spells harmony in every line. There is a definitely expressed purpose in the composition, the entrance and the exit, with well-modulated perspective. The light was chosen judiciously — indeed, the conditions in this respect seem to be ideal. Mr. Leppert is to be complimented. Data: June, 11 A.M.; 6½ x 8½ Conley View-Camera; Velostigmat lens; stop, F/11; 4-time color-screen; exposure,  $\frac{1}{2}$  second; Seed L. Ortho; pyro; print on A. A. Azo.

### Beginners' Competition

THIS competition has rarely had so original and pleasing a genre as Mr. Ward's entry, page 243. It's a little masterpiece. The figure, with its well-modeled face and hands, is very plastic, which important quality is due to the management of the light and the optical character of the lens. In fact, this beautiful result was obtained by flashlight, used so skillfully that no retouching of false lights and objectionable shadows was found necessary. A commendable achievement, this! Data: July, 11 A.M.; indoors; dull light; 5 x 7 Century camera; 11¾-inch Darlot Rapid Hemisphere lens; stop, F/16; flashlight; Vulcan plate; Seed's M. H. developer; print on soft semi-matte cyko; 10 grains Victor flash-powder on Spredlite lamp. The little model is Barbara Ward, two and a half years.

Mr. Fields seems to appreciate the value of uphill or upward perspective in photography, where the elevation of a pictorial subject in nature should be manifest. Here, page 244, this important quality is enhanced by a fitting foreground, characteristic of the locality; and in the entire pictorial scheme the fall appears as the dominant feature. It is, all in all, an effective and satisfying composition, well proportioned and exceedingly well done. Data: March 5, 1 P.M.; bright sun; 3 A special kodak; Zeiss Kodak anastigmat lens; stop, F/6.3; kodak color-screen;  $\frac{1}{50}$  second; Rytol in tank; print on Azo Hard Medium, Grade E.

Mr. Murray's marine, page 245, is clear and refreshing. Though made instantaneously, the picture shows adequate exposure throughout, and an appreciation of judicious spacing. Data: June 9, 5 P.M.; cloudy; 5 x 7 plate-camera; B. & L. R. R. 9½-inch lens; stop, U. S. 16; exposure,  $\frac{1}{2}$  second, bulb-exposure; 5 x 7 Standard Orthonon; Eastman pyro-soda developer in 20-minute tank, at 65 degrees; portion of negative enlarged on Azo Rough Soft.

### Sustained English Humor

IT is impossible not to admire the cheerful and optimistic spirit of the English people at a time when the safety of their country is seriously threatened. Diversions to lead the burdened thought into pleasant channels are in order, and to this end a well-known London firm of chemists is conducting a delightfully interesting competition for amateur-photographers. The prizes are given for photographs of the funniest subjects, the aim of which is mirth and laughter. This competition appeals to every person blessed with a sense of humor.

And as to our friend "The Walrus" (Mr. L. F. Wastell, in private life), and who remains easily the humorous writer *par excellence* in the English photographic press of the world, he continues his cheerful prattle unabated, and with seeming indifference to the unprecedented suffering of his maimed and wounded countrymen in the present war.

Discussing the money-making possibilities of photographic enlargements, "The Walrus" expressed himself as follows:

"One of the stiffest jobs in this line I ever worked off was an enlargement of a man's horse winning a race. All I had to start from was a most horrible snapshot, which dimly showed the said horse, with as many legs as a centipede, finishing a bad fourth. I made a very big enlargement of this, sized it and laid into it lustily with oil paint. I turned the first three horses into railings, made the winning-post a tree, put in a brand-new winning-posit just where it did most justice to the horse, and inserted a crowd of vociferously applauding witnesses of the horse's prowess. Then I re-photographed the stirring scene, and made a nice, straight print. The man said it was wonderful what there was in that snapshot, but it was n't half so wonderful as what there was in my print. I charged him a long price, as I said he could well afford it after his horse had won so handsomely, and he was not in anything like a position to deny it."

### Buying a Raphael Madonna

THE story is told of an American millionaire who was fortunate enough to purchase, somewhere in Italy, a valuable Madonna by Raphael. As the Italian government prohibits the exportation, or the taking out of the country, of any valuable painting or work of art, the American resorted to the expedient of having the Raphael painted over with the picture of a winter-scene. He had thus no difficulty in bringing his prize safely to America.

He gave the picture to an expert restorer to have the winter-scene removed. In doing this delicate piece of work, the restorer's assistant carelessly removed a part of the Raphael, which in its turn revealed a portrait of Marconi!

### Our "Miscellaneous" Quarterly Competition

MANY workers occasionally produce pictures of exceptional merit and interest which do not seem to fit any classified subject in the PHOTO-ERA monthly competitions as announced from month to month. Such pictures may be entered in the competition for miscellaneous subjects to be held quarterly, beginning with February, 1917.

The rules, including the award of prizes, that govern the regular PHOTO-ERA competitions for advanced workers will apply to these quarterly competitions. It should be borne in mind that pictures offered elsewhere and rejected may not be suitable.





# ON THE GROUND-GLASS

WILFRED A. FRENCH



## A Clever but Simple Dodge

WILLIAM H. BLACAR, one of our valued contributors, is nothing if not resourceful. Wishing to photograph a house, before which stood a telegraph-pole that he desired to eliminate without doing any work on the negative, Mr. Blacar simply resorted to the old dodge of making a picture from one viewpoint, moving the camera about fifteen feet to one side, and making another. Then he made a print from each negative, and combined them so as to leave out the pole, and made a negative from this combined print.



W. H. BLACAR

Instead of cutting the two prints in two and putting the edges together, which leaves a line difficult to re-touch on the new negative, Mr. Blacar pursued a different course. He learned from a paper-hanger, a long time ago, when patching a piece of wallpaper, instead of cutting the patch, to tear it across as irregularly as possible, for on figured wallpaper the line of joining would hardly be noticed. He applied that idea to his picture of the house, and in making the joining line he tried to make dark meet dark and light meet light. He found that with a little practice he could tear the print so that the torn or covering part would leave a very thin, sharp edge, which, with the aid of the least amount of paste, would leave scarcely any trace of matching. A print of the view including the pole and one without it are shown here, close together. The slight distortion of the perspective in the "doctored" view would scarcely be noticed without the other view for comparison.

## Popularity or Accuracy

In looking through a recent issue of a popular woman's magazine, I noticed an interesting article on certain celebrated paintings. I am not hypercritical, but dislike careless spelling of proper names. I expect that, at least, from a writer of acknowledged authority, or from a writer who professes to be one. A writer familiar with the history of photography and photographic terminology will disdain to use the senseless though familiar term "tintype," but prefer the significant and correct designation "ferrotype." If he is

afraid to employ the latter, he exhibits a species of cowardice. If he thinks that his readers might not understand it, he underrates their intelligence. When I see writers on art convert such illustrious names as Michelangelo, Palma and Cagliari into Michael Angelo, Vecchio and Veronese, I do not entertain that feeling of respect for their opinions that I do for such estimable and accurate art-critics as John Ruskin, Philip Gilbert Hamerton and Théophile Gautier, who had the courage of their convictions, regardless of the weak, conventional utterances of imitative space-fillers who cater to readers incapable of discrimination. They appear only too eager to abandon truth in favor of cheap popularity.

Asked why he departed from the accurate standard of spelling the names of the old masters, the art-analyst, above referred to, replied that his articles on art were intended for those who would recognize the names of great painters in no other way than Michael Angelo, Veronese, Sanzio, Vecchio, forgetting that most of the readers of his distinguished medium know these artists by their real names. Besides, intelligent readers usually resort to the dictionary when they meet a new word, and every English dictionary, even in its abridged form, contains a section devoted to proper names. Who would recognize the eminent painter William M. Chase, of New York, by the designation, "New Yorker," or Dumas, père, as "Père"? Paolo Cagliari is correct, and so known among artists and art-students, although Paul (the) Veronese, as he was known to his cotemporaries, is adequate; but "Veronese" alone,



W. H. BLACAR

never! The same is true of Giacomo Palma, il Vecchio (the Elder). Palma Vecchio, shortened, has been accepted by catalog-makers and writers; but the use of the adjective, Vecchio, alone, is ridiculous. Authoritative European writers on art use Michelangelo's family name, "Buonarroti," exclusively, to distinguish him from another but less famous Italian painter, Michelangelo (Amerighi) da Caravaggio. PHOTO-ERA readers who have occasion to refer to the great Dutch painter, Frans Hals, should remember that "Franz," the German form, is used only by careless writers. If you follow others slavishly, you are not just to yourself.



## EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication



### Boston Secures E. J. Wall, F. R. P. S.

PROFESSOR E. J. WALL, F. R. P. S., vice-president of the Syracuse Section, American Chemical Society, member of the Optical Society of America, etc., eminent physicist, photographic investigator and writer, has resigned the chair of photographic science at the University of Syracuse, U. S. A., and accepted a permanent position with the Industrial Research Laboratories of Kalmus, Comstock & Wescott, Inc., engineers, Boston, U. S. A.

In addition to some very large electro-chemical and manufacturing-projects which this firm has handled of late, based upon its processes and patents, it has developed a commercial two-color process for motion-pictures. It is particularly in connection with the commercializing of this motion-picture process in natural colors that Professor Wall has associated himself with this firm. The process is remarkable for accuracy and effectiveness, and all the Kalmus, Comstock & Wescott, Inc., patents involved have been taken over by the Technicolor Motion-Picture Corporation, Boston, a company formed to commercialize them. This latter company is at present taking its first production for public performance, which will be released about New Year's.

### Photographs of the Scott Expedition

THE collection of enlarged photographs from negatives made by H. G. Ponting, who accompanied the Scott expedition to the Antarctic region, is now being shown in the larger cities of the United States. During the months of August and September the pictures were exhibited in the gallery of the art-dealer, Charles E. Cobb, Boston. Thence they journeyed to Cincinnati, to be displayed in some art-store whose name had not been given us at this writing.

It is likely that this unusually interesting set of photographs will be seen later in Chicago, Omaha, Denver and other large cities in the West, as the proceeds of the sale of duplicates of these enlargements (prepared in and sent from London) will be devoted to a great and deserving charitable object. Persons who are interested will have an opportunity to admire the daring and artistic skill of Mr. Ponting, the photographer, and the exceedingly effective enlargements.

### Dr. Kilmer Won All the Honors

It is interesting to learn that Dr. T. W. Kilmer's photographic entries in the Nassau-Queen's County Fair, held during the last week in September, took all the awards offered in photography. There were seven classes, first and second prize in each of the seven classes—fourteen awards. W. H. Zerbe was the judge.

### The New York Schools of Photography

THE best two photographic schools in the East are the Clarence H. White School of Photography, New York City, where students are taught art-practice and art-appreciation, also photo-chemistry and physics (send for catalog); and the New York Institute of Photography, where students may learn the practical and commercial sides (see advertisement).

### Phil M. Riley in a New Field

MR. PHIL M. RILEY, co-author of "The Wood-Carver of Salem," for many years Associate Editor of PHOTO-ERA, and well known to the reading-public for his articles in many leading periodicals devoted to photography, architecture, mechanics and the motor-car, has joined the editorial staff of *The India Rubber World* as chief writer. Mr. Riley has been studying the rubber-industry for some time past, has appreciated its great opportunities and hopes to make it his life-work. The best wishes of his friends and the Editor and Publisher of PHOTO-ERA follow him into this important and profitable field.

### Exhibition of Photography by the National Arts Club

AN interesting and instructive exhibition of the development of photography from the earliest stages to present-day methods was held under the auspices of the American Institute of Graphic Arts, at the galleries of the National Arts Club, 119 East 19th Street, New York City, October 4 to November 1. There were notable collections of daguerreotypes, talbotypes, ambrotypes; also specimen prints by photo-mechanical and reproductive processes, including autotype, heliotype, photo-lithography, photogravure, photo-engraving and rotogravure.

The Brady photographs included portraits of many famous Americans—Lincoln, Grant and Lee—and numerous Civil War scenes. The collection of autochromes by Dr. Arnold Genthe, and one of Henrietta Hudson, consisting of iridescent soap-bubbles, were remarkable for fidelity and beauty. The exhibit of color-prints, by the F. E. Ives process, in its latest development, was a revelation of the highest possibilities in color-photography.

There were also lectures on practical topics by prominent speakers, including Pirie MacDonald, "Professional Portraiture;" Prof. C. F. Chandler, "The Development of Photography;" Dr. Arnold Genthe, "Color-Photography," and W. L. Palmer, "Motion-Pictures."

Among the eminent exhibitors of photographs in monochrome were Gertrude Käsebier, Pirie MacDonald, Clarence H. White, Hollinger & Co., Dr. D. J. Ruzicka, Karl Struss, W. B. Dyer, Edward R. Dickson, Elias Goldensky, A. L. Coburn, Arthur D. Chapman, Francesca Bostwick and The Century Company.

The Eastman Kodak Company contributed a collection of portraits of the pioneers in photography and a number of beautiful Kodachromes.

### Camera Club of Detroit

At the annual meeting of the Camera Club of Detroit, October 2, the following officers were elected: president, Joseph Mixsell; vice-president, Dr. Oscar E. Fischer; secretary-treasurer, Helen E. Cary. A monthly club-competition has been started, one requirement being that the prints entered shall have been made from negatives exposed during the month previous to the competition. This is done to stimulate continuous work. The club-rooms are at 513-15 Kresge Building, Detroit.





## WITH THE TRADE



### Bay State Film-Factory

MR. FLOYD M. WHIPPLE, for a number of years business-manager of the Central Dryplate Company, St. Louis, has recently accepted the position as general manager of the Bay State Film Company, of Boston, U. S. A. This is a new firm, with sound financial backing, and will be equipped to produce high-class positive motion-picture film. A large factory will be erected at Sharon, Mass., and will be ready for occupancy November 1, this year. Mr. Whipple has had long and practical experience with the manufacture of dryplates, and has managed the business successfully for his old firm, so that with him at the helm the Bay State Film Company cannot but prove a reliable source of supply and a financial success.

### The Revival of Liquid Developers

JUST prior to the war almost any well-informed photographer would have maintained that the concentrated liquid developer was on the decline; in fact, that its day was past. This is hardly the case at present, however. The various attempts to manufacture a metal substitute have demonstrated the fact that fewer difficulties impede the production of paramidophenol than almost any other coal-tar developer, and paramidophenol is a real substitute in that it may replace metal in any favorite formula with gratifying results. The fact that several British as well as American firms have engaged in the manufacture of the sulphate and hydrochlorate of paramidophenol probably explains the wide publicity being given in England to three concentrated single-solution developers resembling rodinal in their action. We refer to Azol—Johnson & Sons; Kodol—Kodak, Ltd.; Ronol—Boots, the Chemists. As stated in any comprehensive encyclopædia of photography, rodinal depends upon paramidophenol for its reducing-action. A formula for its preparation will be found on page 239 of this issue.

### Utilizing a Photographic Expedient

THE advertising-agency of a well-known American phowing-firm showed its spirit of enterprise recently by placing a full-page advertisement, for one day, in many of the principal daily papers of the United States, reminding the public that its customer's product is put up in reddish brown colored bottles similar to those in which the amateur photographer keeps, or should keep, his solutions.

Similarly, in thus excluding the actinic force of daylight, the keeping-quality of the bottled beverage is definitely assured.

Incidentally, it is interesting to know that the cost of placing this full-page advertisement in 150 publications was nearly \$50,000!

It would not be a bad idea if the producers of the beverage alluded to were to recognize the importance of the practical photographer in a substantial way, by presenting one dozen bottles to every prominent camera-club or photographic society in the country. If any of the cities concerned should be dry, the situation would be intensified and developed into a negative. Enlarging this subject and reducing it to a positive statement—substitutes are condemned!

### The New Finger-Print Camera

THE Bertillon system of detecting criminals has brought into being the latest Folmer & Schwing camera, known as the Finger-Print Camera. While it resembles Graflex instruments to a certain extent, it is so constructed as to ensure accurate records of finger-prints even in locations inaccessible to ordinary cameras. All unnecessary adjustments have been eliminated, so that expert knowledge of photography is not essential to its successful use. Four electric lights, operated by batteries, all within the camera, make the operator independent of daylight. To photograph a finger-print the metal door at the front of the camera is opened by pressing a button under the panel, the front of the camera is placed firmly on the subject and the slide in the plate- or film-holder withdrawn. The exposure is made by pressing down a small lever, which also turns on the four lights. A supplementary button is also provided to turn on the lights without operating the shutter, so that the camera may be used as a searchlight for locating the finger-print. Storage-space is provided within the camera for six extra lamps. The lens is of correct focal length to record finger-prints full size on a negative  $2\frac{1}{4} \times 3\frac{1}{4}$ , from which enlargements of any size may be made. The camera takes a plateholder, roll-holder, magazine-plateholder or filmpack-adapter. The price, complete with lens, shutter, two batteries, ten lamps and one double plateholder, is \$30.

### No Dearth of Goerz Lenses

WE have been informed by the C. P. Goerz American Optical Co., 317 East 34th St., New York City, that adverse conditions caused by the European war have compelled them to cancel and withdraw all former prices. The company reports that, whereas the war has interfered somewhat with the delivery of their cameras, yet, as regards lenses, they have been more fortunate. Prior to the war they had imported a large quantity of genuine Jena glass which their completely equipped optical factory in New York City has been turning into Goerz lenses without interruption. At present the company is in a position to supply nearly all its lenses. A new catalog, containing a list of such goods and accessories as they are able to furnish in reasonable quantities, is now on the press. It will also contain the new list-prices, which are about 10 percent in advance over the prices in force prior to October 1, 1916, and will be ready for general distribution within a short time.

### Bright Business Outlook

JUDGING from the activity displayed in the advertising-columns of the photographic press, the outlook for a large and prosperous photographic business, this fall and winter, is exceedingly bright. The leading American camera-manufacturers are not only increasing the sales of their standard equipments, but introducing new models, that embody the best ideas of compactness and appearance consistent with efficiency and durability, and the importing houses seem to be able to procure selected and popular goods from England and France to meet all reasonable needs. Thus the friendly industrial rivalry continues, despite the European war.

December

1916

15 Cents



# Photo-Era



The American Journal of Photography





# ANSCO

## CAMERAS & SPEEDEX FILM

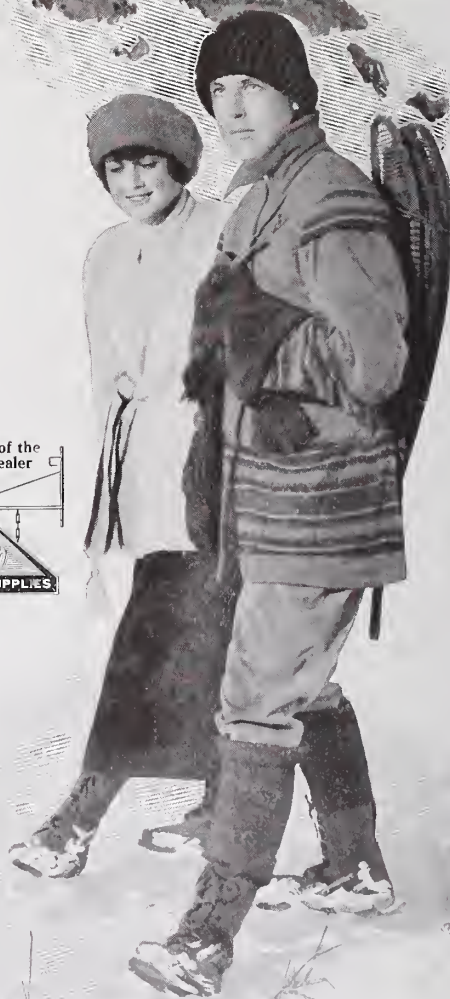
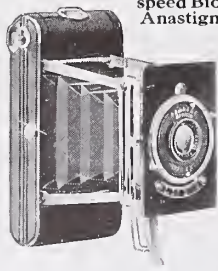
When you give an Anso Vest-Pocket No. 0 you start a chain of happiness that begins on Christmas morning and adds to itself every time a picture is snapped throughout the year.

The Anso Vest-Pocket No. 0 is small enough to carry with you always as you do your watch—in your pocket. The pictures it takes are so clear and sharp they can be enlarged successfully.

It is the only camera in the world, for taking  $1\frac{5}{8} \times 2\frac{1}{2}$  pictures, which has a focusing device for use with an anastigmat lens—and without a focusing device an anastigmat lens is of no greater value than a cheap lens.

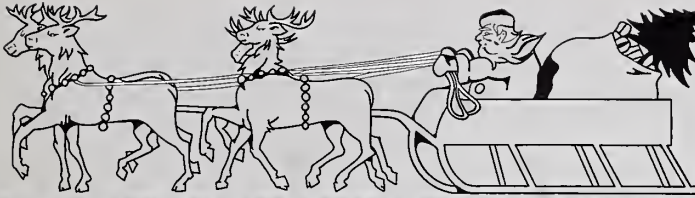
Anso Cameras are priced from \$2.00 up. Choose your gift from the Anso Catalog. If you do not know the Anso dealer in your city, write direct to us.

Anso Vest-Pocket No. 0  
 Equipped with single achromatic lens,  
 \$7; with focusing device, Extra-  
 speed Bionic shutter and Modico  
 Anastigmat lens, F 7.5, \$15;  
 Anso Anastigmat lens,  
 F. 6.3, \$25.



ANSCO COMPANY BINGHAMTON, NEW YORK

PHOTO-ERA the Blue-Book of Photographic Advertising



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**To Contributors:** Contributions relating to photography in any and all of its branches are solicited and will receive our most careful consideration. While not accepting responsibility for unrequested manuscripts, we will endeavor to return them, if not available, provided return-postage is enclosed. Authors are recommended to retain copies.

**To Subscribers:** A reminder of expiration will be sent separately at the time the last magazine of every subscription is mailed. Prompt renewal will ensure the uninterrupted receipt of the magazine for the following year. Send both old and new addresses when requesting a change.

**To Advertisers:** Advertising-rates on application. Forms close on the 5th of the preceding month.

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## Photo-Era, The American Journal of Photography

WILFRED A. FRENCH, Ph.D., Editor and Publisher

A. H. BEARDSLEY, Assistant Editor      KATHERINE BINGHAM, Editor, Monthly Competitions  
383 Boylston Street, Boston, Mass., U. S. A.      Cable Address, "Photoera"





INEZ MILHOLLAND BOISSEVAIN  
NORMAN BUTLER



# PHOTO-ERA

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## Portraiture in the Home

NORMAN BUTLER

**N**O one now questions that the proper place to photograph anybody is in his own home. Nor can any one now question the feasibility of it. The question of importance to the established studios is how to get the home-portrait business. The peculiarity of that business is that it does not come to the studio. It must be sought. So must all business, of course. But this is in a class by itself, for the reason that it did not originate with the studios, but with advanced amateurs and semi-professionals who maintained no establishments. These people developed methods of their own in making sittings in the home, disregarding all, or nearly all, the technical rules of composition and lighting long upheld in the studios. The consequence now is that they are doing a large part of the child portrait-work in many large cities — in fact, have become professionals themselves, but with a special training all their own in solving the problems peculiar to home-portraiture. In fact, the leading photographers to-day are, without a doubt, these same amateurs and semi-professionals. They have done more toward promoting the interests of art in photography than all the studios put together have ever done. This is because they are in a position to do away with rules and conventions, and do things in a new and original way — and they are getting business.

The studios are feeling the effect of this competition. A well-known photographer in a city of considerable size, near New York, said to me not long ago: "I have got to do something strenuous to keep my studio going, for you home-portrait fellows are coming over here and taking away all my business." And this man was the leading portrait-photographer in his city for many years.

As a matter of fact, many of the big galleries are adding home-portrait operators to their corps

of workers, or, at least, advertising to make sittings in the home. But some of them — I do not know how many — are making one mistake that I believe they must correct if they are to develop this end of their business fully. It is that they do not offer sufficient inducement to experienced home-portrait men to join their forces. The proposition which they usually make to such a man is that he work on a commission-basis, working up his own business as he goes along, just like any itinerant photographer, instead of offering him a stated salary. Now, home-portrait sittings, above all others, should be made by appointment only, and these appointments should be made by the studio-management and not by the operator. The status of the home-portrait operator should be such that he can give all his time to operating that is not taken up in travel from place to place. He will have little enough time at that, for not only can he cover fewer sittings a day on account of their distance apart, but operating in the home is so much more difficult than in the studio that each sitting takes longer if a respectable series of good proofs is to be shown. This is true especially if the sitters are children.

In addition to this, the sitter comes in closer contact with the operator. They are not such strangers to each other as they are in the studio. No one going to a studio to be photographed cares very much who takes the picture. He takes it for granted, as a general thing, that the personality of the photographer is not to enter into the result. But when a mother invites a man into her own home to photograph her children, she is mighty particular about who he is. He must be a clean man, of pleasing address and personality, and he must have a way of making himself quite at home without appearing to be too "familiar." This counts for quite as much as technical ability, and, at the same time, technical ability is more necessary, by far, in home-



work than in studio-work, because the average conditions are so much more difficult.

Therefore, the operator should not only be a salaried man, but he ought to command a higher salary than the studio-man. The inducements should be such as to attract the very highest type of all-around ability. I know a number of experienced home-portraitists who have come up from the ranks of the advanced amateurs who might be glad to make connections with any established institution, but who refuse to be put on a plane with the itinerant photographer or the house-to-house canvasser.

Furthermore, the home-portrait man should be given far more latitude in the matter of posing, lighting and composition than is usually given to the studio-operator. That is, so long as his work is good, he should not be bothered much about whether it is characteristic of the particular studio or not. After a short time operators in the studio can adapt themselves to the styles of work — lighting, posing, etc. — which are maintained as the standard for that studio; but no home-operator could guarantee to accommodate himself in this way, because it is his business to get such effects as he sees at the moment, and they may not resemble anything ever turned out by his firm before.

And now some suggestions to the operators themselves, if they happen to be so unfortunate as to be studio-bred. You will see in books and magazines, and will be given by your employer, perhaps, elaborate directions for "lighting and posing the sitter to give softness and roundness to the features," for making the light from a window "fall upon the sitter at an angle of 45 degrees," etc. Here we have, not a home-operator talking, but a studio-operator trying to make the ordinary room over into a skylight-room. The answer is, it can't be done! And if it could, what's the use?

One of the chief values of the practice of making portraits in the home is the breaking down of old standards, the knocking of outworn conventions into a cocked hat. Trying to make the old conventional systems of lighting fit into the scheme of home-portrait making is like trying to fit a square object into a round hole. And, after all, there is nothing sacred about skylight-lighting. As for myself, I simply tell my clients that they must not expect the same kind of soft lighting that they would get in a studio.

They must accept more contrast, more abruptness in transition from light to dark (as a rule, that is), than they are accustomed to ordinarily, perhaps. But that has nothing to do with the likeness; and the fact that the result is different may prove — generally does prove — a point in its favor.

The same thing applies to posing. The home, above all, is no place for fancy posing. You are supposed to be photographing the sitter in his home because he feels more natural there than he would in the studio. Take advantage of this feeling — don't try to break it down. Let the sitter pose himself. Let him *be* himself.

Naturalness must be the keynote in all home-portrait work. Artificiality of any kind is as out of place here as a hog in Alaska. For instance, do not take painted scenery to the home with you, as I have known operators to do, so as to



"LOOK WHAT HE 'S DOING!"

NORMAN BUTLER



“BOW WOW!”

NORMAN BUTLER

make the background suggest that the picture was taken in the studio. And, above all, do not, on any account, work in backgrounds on the negative. Why should you? One of the main objects in going to the home is to get the *home-setting*. One of your strongest talking-points, too, in soliciting business is that the sitter is pictured in his own environment. What if the public does rave over worked-in backgrounds? It raves only because it has been taught to do so. It can just as easily be taught to rave over the other thing — and the expense of all that extra work is avoided.

Besides, the professional photographer should be just as eager as the amateur to promote the interests of photography as an art. There has been too much science and not enough art in the general run of work. More attention has been given to the problems of how to intensify negatives and convert a rich black-and-white gaslight print into a dirty red (called “sepia”!) than to the problems of light and composition. The average

operator thinks he knows a lot about light, but he does n't. All he knows is how to produce well-known conventional effects by means of curtains and blinds under the skylight. Any one can learn rules. But progress depends upon the study of new effects of light. The average photographer imagines that he knows a lot about posing and composition, but he does n't. All he knows is the rules that have been given him as gospel by somebody else. It takes no genius to apply rules. What is wanted nowadays is originality, new ideas, fresh points of view. There is nowhere any greater chance for this than in home-portrait photography. You strike a new set of conditions at every sitting. These conditions offer all sorts of opportunities for new and original treatment. The right man is the one who knows how to take advantage of these opportunities. When you go into a home, leave your studio-experience behind. If your employer does not agree with you in this — well, there are others!





BABY BRENEISER  
NORMAN BUTLER



# The Miniature Camera for Scientific Work

LEHMAN WENDELL



ALTHOUGH an increasing number of exacting photographers are adopting the miniature camera for serious work, I doubt that even the boldest enthusiast would dare to advocate such an instrument for scientific work in the research-department of a state-university. Yet it is precisely for such a purpose that I have used a pocket-camera during the past year. My story is a rather interesting one, and I may be pardoned for relating it. Without going into details, let me say that several years ago I entered the College of Dentistry of the University of Minnesota. Near the close of the first year the dean of the college discovered that I knew something about photography, and he immediately engaged me to do the scientific photographic work in the research-department, a position which I accepted gladly, as it meant a monthly income to me and offered a means to pay some of my expenses.

I was provided with an excellent darkroom. And the room was "dark and void," using the words of Genesis. I say it was void, because there was not so much as an empty bottle in that room. So my very first consideration was to equip with chemicals, trays, plates, etc., etc., all of which were to be had by making out a requisition and sending it over to the purchasing-department.

One of the head instructors, himself somewhat of a photographer, took up the matter of camera-equipment with me. I considered it good policy to agree with him in the main, because he knew the nature of my work better than I did, and for that reason would be more likely to understand what sort of a camera would be most suited to my needs. Finally, a requisition was sent in for a high-grade 5 x 7 view-camera, equipped with a Turner-Reich convertible anastigmat lens, F/6.8.

There is much red-tape connected with the ordering of goods in a state-university, and fully a month passed before the camera arrived. Meanwhile, I was called upon to take a number of pictures, and the only recourse I had was to use my pocket-camera, an Ica Ideal, 2½ x 3½, equipped with an anastigmat lens, F/6.8.

I shall never forget my initial experience. The head of the oral surgery-department brought in a patient to be photographed. I stepped into my darkroom for a few moments and presently came out carrying my miniature camera and a

couple of tiny platcholders. "Great Scott!" exclaimed the doctor, "have n't you a larger camera than that? That little thing will never do for our work." I explained in a voice none too brave that the large camera had not yet arrived and that the little one would have to serve for the time being. Then I set up my camera, posed the patient carefully, shifted the background and did a number of little stunts that I had learned in a photographic studio. The doctor seemed to gain confidence in me, and when the finished picture, a 5 x 7 enlargement, was finally laid before him, he was fully satisfied.

The view-camera finally arrived in a carrying-case the size of a suitcase. It was well made and elegantly finished, and nothing was lacking to make it an ideal instrument for the exacting photographer. I was delighted, and decided to try out the camera at once. I chose an object that would require the maximum of bellows-extension, because much of my work consists of photographing small objects, such as plaster-casts, cross and longitudinal sections of teeth, crown- and bridge-work, etc. I placed the camera on a big firm tripod that had been designed for just such an instrument, but I soon discovered that the tripod had a tendency to topple over whenever I got my head under the focusing-cloth. I finally managed to set up the camera, but upon racking the bellows out to their extreme limit I discovered that it would be impossible to reach the front of the camera and at the same time keep my head under the focusing-cloth. However, after a great deal of toil and tribulation I managed to take four pictures. Being less than a foot from the object I was obliged to stop down to F/64 in order to keep all parts of the picture in sharp focus. With such a small opening of the diaphragm and a bellows-extension of several feet an unusually long exposure was found necessary. On development I found that I had four very good negatives, but the image was only a trifle larger than natural size, so that enlargements would have to be made to produce satisfactory results.

I tried the view-camera on one other occasion, but again found it so bulky and cumbersome that I finally packed it away in its carrying-case and went back to my small camera. Since that day I have never used the large camera, and I am convinced that only on rare occasions will I ever use it again. My small camera does all



that the big one will do and it is far easier to handle. I can take half a dozen pictures with it in the time that it would take to set up the view-camera. It weighs so little that it can be handled with the greatest of ease. The time of exposure is also greatly reduced, because owing to the short focus of the lens the bellows is about a third as long as those of the 5 x 7 camera, and obviously the shorter the bellows, the shorter the exposure. Yet the image produced is just as large as that obtained with the large instrument; that is, a small object, such as a tooth, will photograph a little above natural size, just as was the case with the view-camera. Besides that, the plates are small and cheap, and if, perchance, I waste a plate or two or half a dozen I do not have to lose sleep because I am squandering the appropriations of the state of Minnesota.



FIG. 1

Practically all of my pictures are enlargements. I use a home-made enlarging-apparatus of my own designing, and my Ideal itself serves as the projecting-instrument. With this apparatus I am able to make enlargements up to 22 x 24. I can also reduce and make lantern-slides.

A number of illustrations are added to show the nature of the work that can be done with a camera such as the Ica Ideal, and it may interest the readers of this magazine to know something about how these pictures were produced, what materials were used, the manner of applying the light and the lengths of exposure.

I invariably use plates for my work. No one who is called upon to do exacting scientific photographic work can meet all of the varied requirements with anything but plates. I have tried a number of makes of plates, and find that Hammer's Slow Orthochromatic suits me very well. Several experts have told me that for certain of my work I should use panchromatic plates, and I shall

experiment with these next year. Practically all of my plates require brilliancy, with contrast, such as one obtains in vivid sunlight. In order to get these results I usually develop my plates in Hammer's contrast developer.

As regards printing-paper, I find that the Contrast Enlarging-Cyko is unexcelled. It has much to recommend it. It is rapid, gives sufficient contrast for my needs, develops up with rich blacks and clean whites, has great latitude and will never blister even under the most adverse circumstances.

A great many lantern-slides are called for during the year. I seem to get the best results with Eastman's and Cramer's lantern-slide plates. I use a slow emulsion, so as to increase the contrast and at the same time give me a little more latitude in exposing. If I require an



FIG. 6

exceptionally snappy slide I develop with a contrast developer, and experience has proven that Hammer's contrast *plate-developer* will give excellent results. If slides of ordinary contrast are desired, then the developers recommended by the makers are used. In developing my plates and lantern-slides I usually employ a tank, so as to save time, but I view the plates briefly once or twice during development in order to determine exactly when they have reached the degree of density that I want.

Before concluding this article let me speak a little more specifically, taking up the illustrations one by one. I deem this necessary because many of the little "stunts" which I employ can be applied to other branches of photography, and for that reason should be of value to the photographer who has left the beaten path.

Fig. 1 shows the mandible, or lower jaw-bone, with a dental handpiece held in proper position for preparing a molar tooth that is to be crowned.

Fig. 2 shows the apparatus that was employed to hold the handpiece. Such an apparatus, though designed for an entirely different purpose, will be found useful in any commercial studio. It is known as a burette clamp with stand.

Fig. 3. This shows a longitudinal section of a tooth ground so thin that ordinary print could be seen through it. As will be seen, it has no visible means of support. Most photographers would be puzzled how to produce such a photograph, because any ordinary support would show through the translucent tooth. The method of procedure was as follows: First a dead black background was prepared by removing one end of a shoe-box and then lining the box



FIG. 3

with black paper. Next the tooth was slightly moistened with saliva and laid on a clear negative-glass, to which it soon firmly adhered. The glass was then placed in front of the opening of the shoe-box, and the exposure made, just as one would photograph against the mouth of a dark tunnel.

A photograph such as is shown in Fig. 3 is of value only so far as it shows the structural details of the tooth. Of course, the very minute or microscopic details can be brought out only by photomicrography, but the picture shows sufficient detail to make it of value to the student of dental anatomy. For instance, the junction of the dentine and the enamel, or the dento-enamel junction, as it is called technically, is clearly

brought out. There is also a hint at the direction of the enamel rods and the direction of the dentinal tubuli, while the pulp-chamber and root-canal are clearly brought out.

Fig. 4 shows still another method of photographing an object against a dark background without showing any support. Here an entire tooth was photographed, hence there was no danger of showing the support through the tooth. First of all, the background was prepared by attaching a piece of black velvet to a board. Into this board a copper wire, some two or three inches long, was thrust, and the tooth was attached to this with sticky wax, such as is used by all dentists. In attaching an object in this manner



FIG. 4

heat a small dental wax spatula over a spirit or Bunsen lamp, then pick up a small piece of wax with it, and while the wax is still melted attach the object. The wax hardens instantly, and it is so tenacious that it will hold quite a large object. I was careful to mention that a copper wire was used, because often it will be found necessary to bend the wire after the object has been attached, and copper is so flexible that it can easily be bent without any danger of the object becoming detached.

Fig. 5. This picture represents a tooth imbedded in sterile agar, a gelatinous substance prepared from a Japanese seaweed, and used by bacteriologists in their study of microorganisms. A layer of paraffin was flowed around the tooth



to serve the double purpose of holding the tooth firmly in place and protecting the agar from bacterial invasion. The tooth was next opened up and the root-canals filled in the usual manner, but no great precautions were taken to keep the instruments sterile. As a result of this, bacteria were conveyed into the canals of the tooth, and a dental abscess formed, which appears as an arborescent growth at the apex of the tooth. It gives a rather startling idea of what may happen to a patient if the dentist is not extremely careful to keep his instruments, hands, filling-

I have already said that small objects that are to be photographed may be held in position by being attached to a wire support. However, if the objects are very small, and a great many are to be photographed, it would entail an endless amount of work to wax each little object in place. A far simpler method is shown in Fig. 6. A piece of modeling-clay, such as artists use, is shaped to form a base, and into this the objects or instruments are carefully inserted. In this way a large number may be photographed simultaneously.

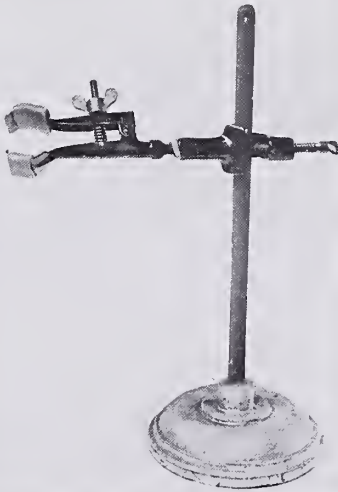


FIG. 2



FIG. 5

material, etc., perfectly sterile while he is filling the root-canals of a tooth. A dental broach that has not been properly sterilized will convey into the canals numerous bacteria bearing such fearful names as streptococci and staphilococci. If dental abscesses are not cured, one or more constitutional disorders may result, such as rheumatism, heart-disease, anemia, etc.

The illustration under consideration is of interest to the photographer in that it shows what can be done by photographing directly against the source of light. The picture had to be made by transmitted light, and so a frosted electric bulb was hung directly back of the glass jar containing the tooth, and the camera was pointed straight at the light. No halation whatever was produced, and the picture shows the tooth exactly as it appeared to the human eye. No precautions were taken to prevent halation; the plate was unbacked, and the developer was of the ordinary kind.

“In his attempt to express the truth beneath the surface, the invisible truth, which fascinated him, Rembrandt discovered for himself a new treatment of light. It was something different from the chiaroscuro (arrangement of light and shade) which other artists used for the threefold purpose of giving substance to form, of producing an effect of aerial perspective, and of making the picture brilliant and impressive in pattern. He, too, used this method of chiaroscuro, but he carried it much farther than any other artist before or since, so that it is called, after his name, the Rembrandtesque Treatment. In many of his single portraits are revealed the wonderful resources of this treatment of light and shade for the purpose of expression. The heads are enveloped in darkness, out of which emerge the features, the eyes especially arresting the attention. Through the depth and poignancy of their gaze one seems to look into the very soul of the subject.”—*Eugene Fromentin.*

# Photographic Uses for White Watercolor

WILLIAM S. DAVIS



ANY amateurs and professionals fall into mechanical ways of finishing their prints, as regards the mounting, and in consequence the average collection after a time becomes tiresome in its sameness and lack of expression, when by the expenditure of some extra time and thought — which amateurs in particular could afford to give — the results might be greatly improved, and a touch of individuality introduced.

One of the simplest ways by which such touches can be added is the employment of watercolor in the production of tastefully drawn decorations upon the mount or album-leaf. These should not prove difficult of accomplishment, even though one does not lay claim to a knowledge of drawing, for the most pleasing effects are nearly always simple in their character, often consisting merely of ruled lines around the prints. As an interesting experiment, take several sheets of tinted mounting-paper of the size one is accustomed to use for mounts, and select a loose print. Mark on each sheet the space to be occupied by the latter — then work out various ideas, lay the print in position upon one sheet after another and compare results. In fact, it is not a bad plan to keep some full-sized sheets of such designs upon different shades of paper handy, thus giving an opportunity to try the effect before applying a design to the mount. To start with, make a single white line about half an inch outside the edges of the picture. This, alone, often is quite enough to add much to the finished appearance of the mounting upon either black or gray paper. Then try another, with double lines an eighth of an inch or so apart. Again, draw a short extra line outside at each corner, or break the straight border-lines before they reach the end, and fill the remaining space with a simple corner-piece. Outer lines close to the margin of the mount are also helpful, sometimes. In fact, the opportunities within the bounds of good taste are broad, and, if one does not care to rely upon their own inventiveness for more elaborate decorations, many helpful ideas can be picked up from various sources, such as the advertising-pages of periodicals and well-designed booklets, to say nothing of suggestions freely given by the makers of some products used.

Perhaps, when decorating an album in the manner outlined, the most beneficial effects are noted where there are several small prints upon each page (as in the illustration), for, no doubt,

every reader who has tried it knows how difficult it is to arrange them satisfactorily. Almost always some will look unduly crowded, and blank spaces appear between others. Running a quite heavy line around the leaf, to enclose all, has the effect of tying the group together, so to speak, after which panels drawn in the blank spaces, with suitable title or quotation introduced, will balance the whole.

In the case of separate mounting upon cardboard or heavy bristol, a mat or inset of differently toned paper under the print is sometimes useful in combination with a delicate white line. Once in a while, both black and white lines can be used together.

One of the most universal uses for a good fluid white is in titling prints and placing one's signature upon the margin of mounts. The black, dark gray or brown flexible-leaf albums so generally employed are almost, or quite, impossible to write upon in ordinary black ink or pencil in a reasonable manner, and in consequence many amateurs neglect to add descriptive titles at all, or, when they do, they disfigure the prints themselves by lettering across the face. There is no question but that suitable titles and brief descriptive notes add greatly to the pleasure of looking over a collection of vacation- or travel-prints, particularly to one who is not acquainted with the events or locality represented; but, of course, good taste demands that such matter be added neatly, so as not to mar the general effect. When much writing is done, it can be placed advantageously upon the back of the leaves; but usually a nicely lettered title in good plain form upon the margin, below each print, is entirely satisfactory.

If one wishes a softer effect than pure white gives on a dark foundation, a very little ivory black watercolor mixed with the white forms a light gray that will show clearly enough on a black mount, and at the same time enough lower in tone than the high-lights of the pictures not to attract undue attention.

To make light decorations on a sepia mount harmonize best with prints made upon buff-toned stock, warm the white slightly with just a dash of raw sienna. In fact, an opaque shade of any color is readily obtained by the admixture of white with the basic color; but in photographic work the modifications mentioned are sufficient.

Now that the holiday-season is so near, the amateur who is so disposed can produce a num-





SUPPER-TIME

FRED. SUTTER

ber of gifts for a small cash-outlay which will be more highly valued by the recipient than anything obtained ready-made over a counter, because the personality and thoughtfulness of the giver are sure to be reflected in the work. The professional, too, in many a town of moderate size, could add considerably to his profit by making up, in slack times, attractively designed greeting-cards of a character different from those turned out by commercial houses, and, in addition, choice booklets containing a few carefully selected pictures of local landmarks or familiar beauty-spots. Such work surely appeals, and commands the price, among discriminating customers — as well it might, for it “goes to the right spot” when used as a remembrance to distant friends, especially if the latter were former residents of the locality represented. The cost and labor of doing such work in reasonable quantities need not much exceed the usual output after the special designs have been made, because, when desired, new negatives are easily made of the combination (as described later).

As there are several ways to produce pleasing cards and folders, I will describe some of the easiest for the average amateur to employ, leaving it to interested readers to choose from among them.

When a few copies only are wanted of any given subject or design, or it is desired to have every one different, it is, of course, not worth

while to do anything but add the decoration by hand to each print. In such cases, first make all the prints required upon a matte or rough surface paper (as such harmonizes best with the hand-work added), the size depending upon how large the finished cards are to be, and the space wanted for ornamenting and lettering. There is no reason why good-sized cards with liberal margin around the prints should not be made if they are sent out in wrappers; but if planning to keep to the standard postal size of  $3\frac{1}{4} \times 5\frac{1}{2}$  inches, the prints should not be larger than  $3 \times 4$ , whereas those no more than  $2 \times 3$  can be used effectively if bold, simple compositions are selected. The possessor of a pocket-camera should have many negatives just suited to the purpose, and often a bit from a large negative is better than the whole. The next step is to procure a few sheets of tinted bristol or heavy “cover-paper” from a job-printer or photo-supply dealer, and cut these to the size wanted. One can have this done for a trifle extra; but if done at home, I would advise using a straight-edge and sharp knife, rather than shears. Mounting is the next thing in order, and to prevent excessive curling when mounting prints upon light-weight card-stock, it is best to sponge off both sides of a mount with clear water, and stand aside for a few minutes to let the mount absorb the moisture, the object being to make it expand and contract to approximately the same degree as the print. Now apply a good



AT THE HARP  
E. L. BOYD







BUSINESS SUSPENDED

A. J. TESSIER

photo-paste to the back of the *dry* print, lay in place and roll down well. When the moisture from the paste has dried out enough to make the print surface-dry, place between blotters and lay a book or other weight upon the whole. Should any card exhibit a tendency to curl when dry, moisten the back well and press again.

After the above job is done, the cards are ready to receive any lettering or decoration desired upon the margin. The latter might sometimes take the form of simple, little outline-sketches placed in an informal manner, somewhat after the manner of a *remarque* proof-cutting.

Another way to produce an effective tint-border, without the trouble of mounting, is to use a double-weight grade of gaslight or bromide paper the full size wanted for the finished cards

— or regular sensitized postals — and resort to double-printing, which is not a difficult matter. If this is tried, two masks cut from any non-actinic paper are needed — one with a cut-out the size of picture desired, and another of the same shape as this opening, to protect the picture-portion, whereas the second exposure is made for the border. This mask may be the same size as the opening in the first when one wishes the tinted margin to come right up to the picture, or a little larger should a narrow white space be desired between. To ensure ease in handling, the second mask is gummed in proper position to a piece of glass the same size as the outside measurement of the cut-out mask, so that the parts will register when interchanged. The appearance of extra surface “texture,” similar to a rough melton card, can be imparted



MIGNON (AIZELIN, SCULPTOR)

S. ALMQUIST

to the tinted border by covering the plain glass with fine tracing-paper; or by substituting ordinary commercial ground-glass, used with the ground side next the sensitized paper.

The *modus operandi* is simple. First, expose the paper with negative in position and cut-out mask over it—then substitute the glass with second mask attached, and expose again, the relative length of this exposure determining the depth of tint produced on the border, ranging from pale gray to pure black. The only care necessary to obtain fairly correct register, is to make sure that the positions of both masks are right when they and the sensitized paper are pushed into one corner of the printing-frame. The watercolor-decoration can be applied quite as well to prints of rough or matte platinum-surface as to mounting-paper.

When something a bit more distinctive than a card is desired, try a folder. For the cover, use a heavy grade of mounting-paper, or what goes under the name of "cover-paper" with printers—the difference is mainly a question of where you buy it—cut to double the size wanted, and fold upon either the long or short side. Insert a print on the inner right-hand page, it being better in this case simply to tip it on by the upper edge with some good adhesive. Assuming, for example, a gray paper has been chosen, run a white line all around the picture, and another of the same size upon the opposite page, within the boundaries of which letter some appropriate verse or quotation—using white, as before. A touch of color might be introduced here, if thought best, by means of an ornamental initial-letter, which allows for quite a variety of treat-



ment — as doing it in color upon the natural gray ground; over a square of white; or reversing the latter idea and making the letter in white upon a colored foundation. A personal word of greeting might be placed upon the outside, together with one's autograph signature. In any case, I am sure that the result will please those of exacting taste.

Among other timely decorative applications, where a bit of hand-work can be introduced with good effect, are calendars, menu cards and the like, including many novelties which will suggest themselves to various readers.

If a dozen or more copies of one design are wanted, it often pays to make a negative of the original combination, so that finished results are obtained by one printing. Experienced workers need no advice about copying, but a brief description may help beginners.

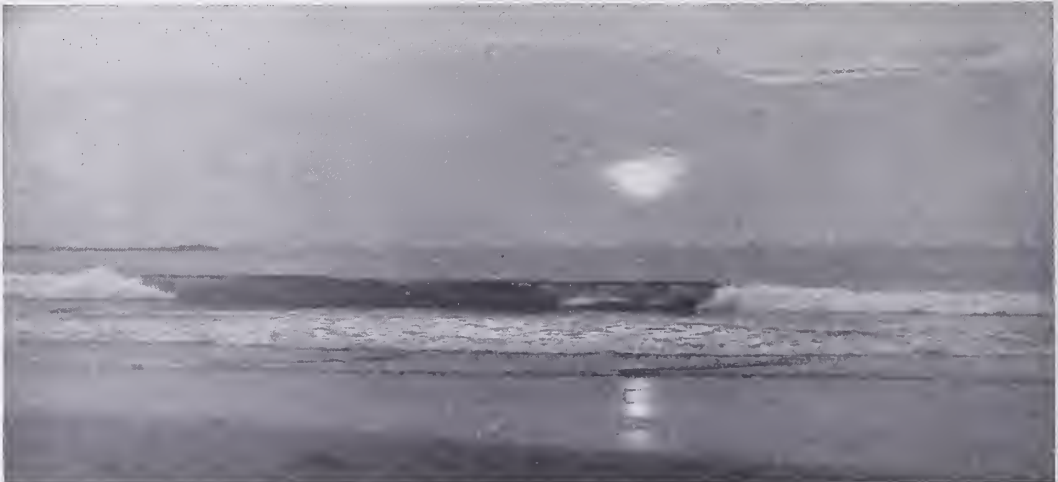
First, place the camera — which must have means for focusing — on a stand or table near a window, where the original will receive even, diffused illumination. Fasten the original to a box, or other support, which can be moved back and forth freely, but be sure always to keep it exactly at right angles to the lens, otherwise the copy will be distorted. If the bellows-extension is not great enough to allow focusing the image to the size wanted, use a supplementary "copying" or "portrait attachment" over the regular lens, and stop down well to ensure sharp definition. Use any good slow or medium-speed plate, give a fairly full exposure — which is best settled by a trial or two — and develop up strong in a clear-working developer, such as hydrochiou or well-restrained pyro. The result should show the white portions dense enough to print pure

and clear-cut. Should the only camera available not be large enough to give a negative the size desired, the latter might be made to scale and printed in an enlarging-box.

While upon the subject of copying, another use for white watercolor comes to mind, and that is for removing an objectionable background, which can be accomplished by painting out such parts upon an enlargement with white or opaque gray, and then photographing the result. If one possesses some skill, it is possible to work in effects by such means, touch-up highlights, etc.

About materials and their manipulation. I may say there is a variety of white pigments on the market, many of which fail fully to meet photographic needs from one cause or another. "Chinese white," for example, although widely employed in regular watercolor-painting, is not suited to pen-work, because when thinned to fluid consistency it lacks sufficient body to cover a dark ground and to appear pure white. Again, some so-called white inks chalk off when dry, which of course is not satisfactory. On this account I trust that the Editor will overlook my infringement of rules regarding mention of trade-names if I say that a preparation sold under the name of "Snow-White" meets the requirements fully for both pen- and brush-work, flowing well from the pen when used of proper consistency, yet possessing body enough to dry as a true white.

For decorative line-work, like that described and illustrated, a pen is used — one with a medium point answering for both lettering and lining, although for straight border-lines a regular draughting-pen is the best tool. When brushes are needed, use a pointed sable for fine details, and flat wash-brushes for large surfaces.



THE OUTGOING TIDE

KATHERINE BINGHAM



L. M. BURRUD AT WORK

*Courtesy the Century Company*  
MUTUAL FILM CORPORATION

## Mexican Adventures of a Camera-Man

FRANCIS A. COLLINS

**D**URING one of the Villa campaigns in Mexico, a camera-man had the unique distinction to act as a commanding officer. It was all very real warfare, as the deplorable lists of dead and wounded testify; but the camera-man nevertheless often directed the battles much as if he were working in a studio. A large motion-picture company entered into a definite contract with Villa to make motion-pictures of the campaign, to be exhibited later in all parts of the world.

In return for a large sum of money, Villa agreed, among other things, that the fighting should occur always between the hours of 9 A.M. and 4 P.M., when the light would best suit the camera-man. There were to be no night-attacks, because they could not be photographed. And, despite many temptations to fight when light for photographing was poor, Villa kept his word. More than once during the drive southward, the hour of four, when the photographer quit work, found the troops in a perilous position.

According to all the rules of military strategy, the army should have advanced to follow up the

advantage gained in the day's fighting. The council of war invariably included the camera-man, however, who would insist that the drive be postponed until the next day when the light was right, and the battle would be planned accordingly.

In many cases, the fighting was actually delayed to suit the "movie-man," as if the action were taking place on a stage. One day the machine guns had actually been placed in position to meet an expected charge. Mr. L. M. Burrud, the photographer, had set up his camera near by. His range, of course, was much less than that of the rapid-fire guns. The situation was explained to Villa, who thereupon ordered his men not to fire on the advancing enemy until the camera-man gave the signal. The men behind the guns actually stood the enemy's fire without returning it until the advancing troops were within camera-range. Then, and not until then, Mr. Burrud began to turn the crank of his machine. This was the signal eagerly awaited, and a moment later the rapid-fire guns delivered a continuous deadly volley, and the charge was checked.





REFLECTIONS AND SHADOWS

GRANT CASTNER

One of the most spirited pictures brought back by Burrud from the Mexican campaign is a "close-up" of a desperate charge down a city-street. Several soldiers are shown running with fixed bayonets directly towards the camera—one is actually falling forward—and so close to the camera, that the strained expression of their faces is vividly shown. The smoke of battle still hovers above their heads. To catch such a picture, the camera-man must have been in the thick of the fighting.

"A 'close-up' like that," Burrud explained to the writer, "could scarcely be planned. The most daring photographer would not venture so far in. I happened to be down the street with my camera set up in the shelter of a wall when the charge came. It was too good to miss. When I saw them come, I swung my camera around, and it happened that I could operate it while only one arm was exposed to a chance shot. I took that chance. Several shots whistled past, and two men actually fell within good camera-range."

The camera-man at the front is usually well paid. It is common for him to receive one hundred and fifty dollars or two hundred dollars a week and, of course, all expenses; but surely he earns every cent of it. He must not only show himself fearless in very daunting situations, but must be a good photographer and chemist as well.

From "THE CAMERA-MAN," The Century Co.



DRAWING is the grammar of art. As grammar is the framework on which all good literature is built, so drawing is the foundation of all good painting. It is no more possible to imagine a great picture with crude and incompetent drawing than it is to think of a great sonnet whose grammar should be uncouth and halting. Like grammar, also, drawing is not a virtue to be extolled in a picture, but an essential to be demanded. Fortunately, both grammar and drawing may be learned by any one of good average intelligence.

*Birge Harrison*, in "LANDSCAPE PAINTING."



CHRISTMAS-MORN  
KATHERINE BINGHAM





# Dependence of Tone Upon the Character of the Negative

DR. THEODORE KÖRNER



VERY photographer has doubtless found by experience that it is impossible, even with one kind of paper, to obtain from every negative a uniform tone in the print. Certainly, this circumstance will have caused him much trouble, when he has been preparing a collection in which it was desirable to have the greatest possible uniformity of tone in order to show the invariable good quality of his work, or where he wished to give a customer ordering a number of pictures the same tone throughout. He must at first have thought that the fault lay in irregular handling of the toning; but he will have discovered gradually the connection between the tone of the print and the character of the negative; and finally he will have arrived at a certainty that, even with the most careful toning, it is impossible to obtain the same beauty of tone from every negative.

Of course, we must here distinguish sharply between the modulation of light-values and the beauty of the tones of the print. In a superficial examination these two points are often insufficiently separated. The impression of beauty is aroused, in a picture, by the fact that fine modulation — i. e., good gradation between lights and shadows — is combined with beauty and purity of color. Only so can a thoroughly satisfactory impression be obtained.

A picture may be characterized as brilliant when it possesses good outlines and strength in the lights and shadows; the tone will be considered as fine when the print shows no double tones; that is, when the shadows do not have a different *nuance* from that of the half-tones and lights. According to that, one might say that brilliance depends only upon the character of the negative, and the color depends only upon the toning. That, however, is not quite correct. The brilliance of the paper print depends not only upon the character of the negative, but upon the toning, as by toning too long, or with too strong a toning-bath, corroding occurs, and in such circumstances, even with the most brilliant negative, a feeble print will be the result, which will at the same time have a disagreeable tone. This fact is so well known that nothing further need be said about it.

That the tone of the print depends not only upon the toning but upon the quality of the negative, may perhaps be worth verifying. In order

to come at the basis of this fact, it must be stated that it is well known that a certain weakening of the print proceeds along with the toning, which is greater the longer the operation is continued. In order, therefore, to obtain a fine, even tone, based on a strong uniform deposit of precious metal, a thorough toning is necessary. But this is not attainable in all prints. A negative without sufficient contrasts — i.e., with insufficiently covered lights — can only be printed very lightly, as otherwise the whites will not remain clean, but become foggy. When such a print goes into the toning-bath, it cannot be thoroughly toned, because it is not possible to give it a strong deposit of precious metal, since with protracted action of the toning-bath the print becomes strongly corroded, and the already weak image becomes still weaker. The result is that prints from thin negatives can be toned only for a short time, which gives them an imperfect appearance, even when the action is carried as far as possible. That is the reason why with "hard" paper not only a stronger print can be obtained, but better tones, than on "soft" paper.

Now if we would have uniformly good tones on the same kind of paper, we must have, either with combined platinum gold or with simple gold or platinum toning, a uniformly strong metallic deposit on each individual print. This is, however, for the reasons above given, impossible with different negatives. A strong negative will and must in all circumstances give a finer tone than a thin one. From these data, however, we may determine the way to obtain the best possible tone from a given negative. For example, strong negatives should be printed strongly and toned thoroughly in a fresh bath; flat ones, on the other hand, should be toned briefly in an old or diluted bath, at the same time guarding against overtoning, so that corroded, ill-colored prints may be avoided.

But this dependence of the tone of the print upon the character of the negative is not confined to printing-out papers, it also holds good with developing-papers, both in toning by development and in sulphur-toning. Hard negatives give in developed prints, aside from the harder appearance, a more blue-black tone; soft negatives, on the contrary, give a greenish black color. But developing-papers always possess the greatest independence of the character of



DOLOMITES AND COLFOSCO CHURCH

G. R. BALLANCE

the negative when they are developed black, especially if hard- or soft-printing paper is selected according to the quality of the negative. But if the chloro-bromide developing-papers are developed in color (red or sepia), the tone is in the highest degree dependent upon the quality of the negative. Color-development, which otherwise is so simple and pretty, has for this reason been less employed, because it is impossible to get the same tone from every negative.

Of the methods of redeveloping in colors, sulphur-toning alone is very dependent upon the character of the negative, as well as upon the quality of the black development. Copper-red, blue and green tones, however, show scarcely any connection with the nature of the negative or the brilliance of the print.

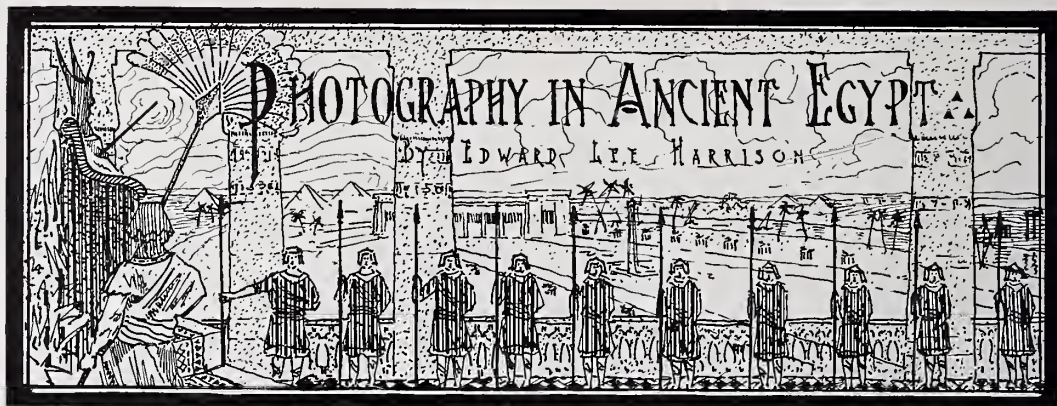
Genuine platinum-paper, whose greatest advantage is the unlimited durability of the print, also shows good properties in regard to dependence upon the quality of the negative. For instance, so long as sublimate or bichromate are not used in working, the same *nuance* results from either hard or soft negatives; as soon as above substances are added to the developer,

however, the influence of the negative on the character of the print is noticeable.

To summarize, the following maxim may be laid down: Developing-paper in black and genuine platinum paper give the same color-tones, with either hard or soft negatives, not considering the hard or soft appearance of the prints; printing-out papers, on the other hand, show a comparatively strong influence of the negative on the tone of the print.—*Das Atelier.*

THE photographer who is entrusted with the framing of colored portraits for his customers, generally chooses a gilt moulding in the belief that this represents the best taste. On this subject, John C. Van Dyke has the following to say: "The gold frames which enclose the paintings in the average picture-gallery are generally of bright gold — so bright, that they are obtrusive. You keep seeing them, feeling their presence. This is a disturbance again, because in good framing one should look *through* the frame and not *at* it. It is, at best, merely a setting for the picture, and you should not be made violently aware of its existence. The frames should be old and dull."





**KA** Y name is Amenophis, and I was born five thousand years ago in Hermopolis, which was at that time one of the principal cities of the Middle Empire of Egypt.

I am at present lying in a mummy-case in the north wing of the Egyptian section of the British Museum. Those who pause to gaze curiously at me do not realize that I can still see all that passes my mummy-case, nor that the long years I have lain here incapable of movement have enabled me to pick up a very fair knowledge of modern languages.

For this reason I was amused, but not astonished, when, last Thursday, a party of tourists which had stopped in front of my niche to take photographs, began to make sport at my expense.

"Imagine this old boy's surprise," chuckled a youth in a bright sweater, "if he could wake up and see the pictures I am taking of him. I'll bet those old fellows back there fifty centuries would have had a fit if they had seen a camera." The rest of the party laughed, and I was smothering my indignation as best I could, when a kind-faced young lady took the speaker to task.

"Jimmie, how do you know they did n't have cameras back in the old days? They may have had better ones than yours, if the truth were known." I could not hear the reply, as they were moving on, but in my heart I blessed the young lady for her kind words, and then my mind left the stone mummy-case in its stuffy little niche and traveled back through the shadowy centuries to the time when I was as young and self-confident as the tourist who had taken my picture. At that time I, like him, believed there was nothing worth knowing that I did not know. Only in my own case my self-esteem led to disastrous results, and, strange to relate, it was this very invention — photography — which caused all the trouble.

My father was the leading physician of Hermopolis, and it was while experimenting with some of his chemicals that I acquired the secret which led to the terrible consequences I have mentioned.

All Egyptian men of science had, for centuries before, made use of the camera in their scientific research-work and for the recording of experiments not involving human likenesses. But none but a madman would have thought of making general use of an invention which would make a likeness of the earthly body of a man, but record no impression of his double, or KA, that elusive but all-important spirit without which man may not exist; for it is only by virtue of its all-powerful protection that the evil spirits which lurk everywhere are kept from destroying him utterly.

Should any be so utterly mad as to do this, the offended KA would instantly forsake the body of the subject photographed, leaving it to its fate. Therefore, the Egyptians took no pictures save of inanimate objects, and then only in specially designed studios where no human being could possibly get in the picture.

The secret I so unhappily stumbled upon was of so stupendous a nature that even now I shrink at mentioning it. It was none other than a formula whereby the KA could be included in the same picture with the man.

Like many other great discoveries, it was totally accidental. I was engaged in trying to discover a method whereby the natural colors could be rendered on the plate, and had devised some specially colored lenses for the purpose. Our knowledge of the coloring and working of glass was far superior to that of your modern lens-makers, and my equipment was such as could have been made only in that time. The art of making malleable glass, invented and practised by us Egyptians, was neglected and, finally, lost during the decline of Egyptian supremacy. Despite the wonderful progress of the



THE MISSING TOY  
E. BLANCHE REINECKE







TEMPLE OF CERES

*Copyright, 1915, E. C. Day*

E. C. DAY

nineteenth century, it still remains one of the lost arts.

Having adjusted my camera to my satisfaction, I departed for the northern section of the city, intending to take some views of the tombs of the kings, which were elaborately colored. I also had a desire to experiment undisturbed, and no one ever goes to that section except for a purpose.

I made several exposures, using two different lenses and several kinds of plates, and returned to my laboratory to develop them. Imagine my stupefaction, and even horror, when I discovered the deserted scenes I had photographed to be peopled by myriads of figures, among which my hasty glance recognized several well-known kings. There could be but one explanation of this remarkable phenomenon. I had at last discovered the secret which the scientists had vainly sought for centuries. I had photographed the KA, the soul of man, and my name would go down the ages as the greatest inventor of the day.

Without delay I communicated my remarkable discovery to my father, who was as much astounded and pleased as myself.

We made preparations to photograph one of the slaves, not being willing as yet to trust entirely our own bodies in the test; but before the experiment was made, my father communicated the fact of my discovery to the high priest, Baknishonsu, who during the day mentioned it to Pharaoh. Immediately the news was imparted to him, Pharaoh desired to be the first to have his picture taken. The messenger arrived just in time to prevent the experiment being made upon the slave. Would to Osiris he had been late!

A request from such a source could admit of nothing but compliance, so with all speed my father and I hurried to the palace. Prostrating myself before the great ruler, I told him of my experiment, and offered him the plates I had taken among the tombs. He examined them, recognizing among them the KA of his father and grandfather, as well as others of his acquaintances and relatives.

Any doubts I might have dared to express, for a single minute, would not have been listened to after this recognition, and I was instructed to prepare at once to photograph the great Thothmes.

I made three plates, in order to guard against any possible failure, and hurried home to develop and print them. Imagine my horror when the ruby lamp revealed a most excellent likeness of the king, sitting upon his great throne, dressed in his robes of state — but alas! no sign of his soul, or KA, without which my daring experiment was a sacrilege. This appalling discovery nearly bereft me of my reason. For days I wandered in the marshes to the east of the city, fearing to return, and subsisted upon the berries and nuts I could collect.

When finally I mustered sufficient courage to venture back to the city, it was to have my worst fears confirmed. Pharaoh had sickened the day after his picture was taken, and the physicians held out no hope of his recovery. My father was already in custody, and a strong guard was scouring the country for my unfortunate self, with instructions to bring me to the guard-room of the palace, dead or alive. Without any resistance whatever I gave myself up, and my father and I together bewailed our unfortunate experiment.

Neither of us doubted that it would cost us our lives in the event of Pharaoh's death, and we were equally certain that this would take place. The only thing that troubled us was as to how the spirit-images on my plates could have become imprinted, if the device was incapable of taking the soul of a man who was alive.

The next day our vain speculations were interrupted by a messenger who bade us follow him to the throne-room. There we found Pharaoh's son, dressed in mourning, who in a terrible voice told us to prepare for death. We were prepared for the worst form of tortures which the cruelty of man could suggest, but were almost overcome when the order was given us to stand forth and have our pictures taken. In vain we implored the king for mercy. He was inflexible. In the same manner as we had assassinated his beloved father, we should ourselves die. The pictures were taken, and within a week my father was a corpse. He never held up his head afterward. As for myself, I was prostrated with grief. My mind was for weeks a blank. I awoke from a long spell of brain-fever to find myself an out-cast from mankind. I lived, it is true, but I truly believe my double left me after my father's death, for I never felt the same again. Go where I would, I could not shake off the heavy sense of impending evil.

For years I wandered from city to city, always with the fear of death stalking at my heels, without joy in the present or hope of the future. Sometimes I tried to settle down and work off the strange fears which assailed me; but something

was lacking, and fears and forebodings of evil drove me away from the place again.

At last I crossed the seas into Babylonia, and for a time prospered as an engraver in a jeweler's establishment. I thought that at last my troubles were at an end, and that the penance for my folly was over; but it was not so to be.

My employer had an only son, who had gone to Thebes to buy some ivory-work, and while there had been stricken with blindness. Being an old man, he could not make such a journey himself, and he besought me, by our past friendship, to go thither and bring his son to Babylon. With many misgivings I at last consented — I could do little else in the circumstances — and set out at once.

I arrived at Thebes only to learn that the unfortunate young man had fallen from a high roof and been killed, and, while preparing to leave with my sad tidings, I was smitten with some strange malady which the physicians could not diagnose, and rapidly sank into a decline. In my heart I knew that the long-delayed punishment for my temerity had arrived, and that no medicines would be of the slightest avail.

Having resigned myself to my fate, I commended my soul, wherever it might have taken up its abode, to Osiris, and quitted a life which, for nearly a score of years, had been little but a mockery. I was embalmed according to the best practice, as my purse was well lined, and my body deposited in a rock-tomb in the Theban hills.

After nearly fifty centuries, I was discovered and brought hither to the Museum, where I lie and watch the crowds pass, for the most part with idle curiosity, unless some chance remark serves to turn my thoughts backward across the vista of centuries to the troubled time of my sojourn among the cities of the Triple Kingdom. Perhaps, some day, a modern wizard will discover the secret which so long eluded the students of my time. When this is done, I am convinced that my KA will return to its rightful abiding-place, and my niche in the Egyptian section will know me no more. The other day I saw a tourist with a strange and new pattern of camera, which he held in front of him, looking down into a sort of collapsible hood. For an instant I thought that the time had arrived; but I must have been mistaken, for I have not had my double restored to me.

I, who have watched so many centuries glide by, can afford to have patience, however. No doubt the deliverer will appear in the time when the gods appoint. It is quiet in the Museum, and quiet reflection and hope are the things, above all others, most to be desired.





CHILD-PORTRAIT  
MAY L. SMITH  
P. A. OF A. SALON



# Burson Tries the Juvenile Market

MICHAEL GROSS



BURSON needed some pocket-money — quickly. Being able to think of no other way to earn it, he decided to get it out of his camera. “These fellows who go around taking pictures of children seem to make plenty of money,” he said to himself. “I guess I’ll take a chance at the game and see if I can’t do likewise. It’s worth a trial, anyway.”

Accordingly, the next morning, he loaded his holders, cleaned his camera thoroughly and wended his way toward the more-densely populated part of the city. “There’ll be no trouble to get customers,” he remarked, as the youngsters swarmed around at sight of the camera. “Take my pitcher, Mister!” came to him from all sides; and Burson, selecting five of the best-dressed children, herded them into a shady corner and succeeded in posing them for a photograph. “Here’s where I clean up,” he said to himself, as he snapped the shutter, “five youngsters taken and only one plate exposed. Why, if I just sell two pictures to each child’s mother, at twenty-five cents each, I’ll have almost three dollars.”

Now Burson was n’t greedy, nor did he care to take the bread out of the mouths of the people who depended on this sort of thing for a living. So, figuring that his one exposure would net him a fair day’s pay, he took the address of each little member of the group, folded up his outfit and went home.

That night he developed the plate. It was exposed perfectly, and Burson laughed at himself for thinking that each child’s mother would buy only two pictures. “They’ll each take a half dozen, at least,” he exclaimed, as he held the negative up to the light again, and gloated over the perfect gradation and wealth of detail it showed.

Lack of funds, however, prevented him from buying enough paper to meet the sales he anticipated, and he had to be satisfied with making only ten prints from the negative — two for each customer. “I know they’ll want more,” he mused; “but they can reorder when they pay for the first two. These ten prints will give me enough money to buy sufficient paper to supply everybody.”

He ferrotyped the pictures, and the next morning, bright and early, he mounted each one in an art-folder (bought during a period of prosperity), and then fared forth to sell them to the

eager parents of his little subjects. The first address he had led him down near the river-front. Burson found the house with difficulty, and, on asking one of the children playing about the stoop, was told that the person he wanted to find lived on the top-floor in apartment thirty-three.

He ran up the five flights of stairs, knocked at the door marked “33” and then waited. Soon he heard heavy footsteps inside, and in a moment the door opened and a frowzy looking woman asked, in a sleepy voice, what he wanted. “I’ve got a photograph here that I took of your little boy,” Burson stammered out, placing one of the pictures into her hand. The lady walked to the window and looked at the photograph long and earnestly. Then she came back to where Burson was standing. “Do you mean to tell me that that ragged-looking, squint-eyed hoodlum is my Charlie?” she demanded. “I’ll have you know that little Charlie is the handsomest boy in this block, even though I say it who should n’t.”

The next moment Burson found himself in the hall, the pictures in his hand and the door slammed in his face. “Whew!” he muttered, “that old lady certainly thinks something of her little Charlie. Well, I’m glad she did n’t buy any, at that. It’ll leave a few more for those who appreciate my work.”

The next mother to whom Burson showed the pictures expressed herself as being very well pleased with the likeness of her little girl and Burson cheered up immediately. “Customer number one,” he told himself, and then out loud he asked, “How many do you want, madam? They’re twenty-five cents each.” “Oh,” the lady answered, “I could n’t think of buying any of them. Do you imagine I’d keep a picture that showed my little Ruth in company with the bunch of ragamuffins you’ve taken in that group? Why, she’d never forgive me if she grew up and saw it.”

Burson went away from there a little bit discouraged. “It is n’t going to be as easy as I thought,” he reflected, as he started for the home of another prospect, “but still, I’ve got three more people to see. They may take all the pictures I’ve got and even want more.”

Sure enough, the third lady to whom he showed the photographs made Burson’s heart glad by the manner in which she admired the little group. Her Ernie was taken fine, she thought, and so were all the other nice children. “Give me six of





DIVERTED ATTENTION

LOUIS FLECKENSTEIN

them," she said, before Burson had a chance to deliver the little selling-talk he had rehearsed in front of his mirror for just such an occasion. He counted out the six pictures as if in a dream. "How much?" the lady asked. "Twenty-five cents each," Burson answered, "a dollar and a half all together."

"What!" the lady exclaimed, thrusting the pictures back into Burson's hand, "twenty-five cents each for them pieces of paper? Why, I had my photograph taken down at Coney Island last Sunday on real tin, and it only cost me five cents. I'll give you thirty cents for the six, although I ought to get them cheaper in such big lots." The material had cost more than that, and Burson, staking all his hopes on the two people he still had to see, disdainfully refused the offer and stalked out.

"Would n't it be funny," he smilingly said to himself, "if, after all those failures, the last two people buy out my whole stock." But it was not to be. The fourth woman he saw thought that the picture was good of every other child but her own, and the fifth and last lady would have bought one if Burson had allowed her to dress her youngster up in his new clothes before taking his photograph. But so long as he was "so smart to take it in that dirty dress and torn stockings and muddy shoes, he ought to be smart enough to sell the picture to some one else."

"I don't know how the other fellows do it," Burson muttered, as he tore the pictures up and threw them into a corner ash-can, "but I guess if I want to earn a little extra money, the best thing for me to do is to go out and chop some wood for it."



## EDITORIAL



### Photographic Home-Amusements

THE camera-user who procured his equipment in the spring, and used it with enthusiasm and practical satisfaction until the first cold snap stopped his outdoor operations, may not be aware that numerous enjoyable applications of his new hobby await him during cold and inclement weather. These are the photographic home-amusements that keep busy and entertain thousands of resourceful amateurs throughout the long winter-months, until spring again invites them forth into the delights of new-born nature. Although the various photographic indoor-pastimes have been the subject of many an interesting article in these pages every winter-season, it may not be amiss to mention briefly the most desirable ones. Of course, the suggestions that are to follow are intended chiefly for those camera-users who merely locate the picture in the finder and press the bulb, leaving to professional experts the completion of the work, i.e., the developing of the exposed films or plates and the making of prints, which processes are both important and interesting, and within the scope of every intelligent person's ability. As the work of certain professional finishers is frequently indifferent, the efforts of the beginner, even after a little practice, are sure to yield superior results.

The projection in an optical lantern of homemade glass positives (lantern-slides) from the camerist's own negatives is, certainly, a delightful and instructive pastime, and has the advantage of giving entertainment to a number of persons at the same time. The preparation of these lantern-slides is extremely fascinating, and involves merely the expense of dryplates. Glass transparencies, as beautiful window-decorations, are made by enlarging in the camera and developed the same as lantern-slides. Local camera-clubs are usually equipped with the necessary apparatus, including the electric illuminant. This is, perhaps, the only operation that may not be conducted conveniently in the home. If properly fixed and washed, photographic transparencies will last almost indefinitely, though exposed to the changing influence of the sun.

The making of enlarged prints from one's own favorite negatives is a particularly inviting pastime, and, tastefully framed, such pictures

form attractive decorations in the home, or suitable wedding- or Christmas-gifts of an exclusive character. The necessary apparatus are one's own camera, a tungsten lamp, an enlarging-easel and trays of the required size.

Photographs by flashlight, made in the home, are the source of great satisfaction. The accidents that occur sometimes in connection with this work are due entirely to ignorance or carelessness, and can be avoided by the exercise of due care, and the use of the proper materials and following the makers' instructions.

Coloring photographs is one of the most attractive of indoor-activities. No special artistic training is needed. It is largely a matter of taste and a sense of beauty and harmony in the choice and application of the colors. A little practice on some discarded prints will enable the novice to acquire a fair degree of skill, and it is astonishing with what facility an intelligent person can produce really pleasing results when employing standard transparent watercolors on matte-surface photographic prints. Coloring or tinting photographs should be done really by direct daylight; but an artificial illuminant can now be modified, by the use of blue-tinted screens, so as to approximate real daylight and give the colors their true value.

Another item which contributes materially to the success and pleasure of amateur photography, is the systematic arrangement of the results. To be able to find a print, negative or data in a few seconds' time, is a source of much satisfaction. With the aid of a complete, modern index-system, the camerist may keep a record of the exposure, place, date, weather, lens, stop, etc., connected with each negative. A classified index helps to locate a negative or print very quickly. The subjects should be classified as portraits, groups, landscapes, places, incidents, etc., and, in each class, the name and number of the corresponding negative recorded.

The making and decorating of photographic picture-postcards, as described by W. S. Davis in this issue, forms still another pleasing and useful home-activity, and requires no great skill in drawing or sketching. The appliances and accessories to be used in connection with the photographic home-amusements, here described, are advertised constantly in this publication, and are of guaranteed excellence.





# ADVANCED COMPETITION



Closing the last day of every month  
Address all prints to PHOTO-ERA, Advanced Competition  
383 Boylston Street, Boston, U. S. A.

## Prizes

*First Prize:* Value \$10.00.  
*Second Prize:* Value \$5.00.  
*Third Prize:* Value \$2.50.

*Honorable Mention:* Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.

## Rules

1. This competition is free and open to any camerist desiring to enter.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. **Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.** Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P., or black-and-white paper having the same gradations and detail.

3. *Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name, address, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what competition it is intended.*

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with double thicknesses of stiff corrugated board, not the flexible kind, or with thin wood-veneer. Large packages may be sent by express very cheaply and with indemnity against loss.

7. The prints winning prizes or Honorable Mention in the twelve successive competitions of every year constitute a circulating collection which will be sent for public exhibition to camera-clubs, art-clubs and educational institutions throughout the country. The only charge is prepayment of expressage to the next destination on the route-list. This collection is every year of rare beauty and exceptional educational value.

## Quarterly Miscellaneous Competitions

In order to extend the opportunities for participation by a larger number of our readers, and to broaden the scope of the entries, these will be a feature of 1917.

## Awards — Animals in Landscape Closed September 30, 1916

*First Prize:* None awarded.  
*Second Prize:* Alexander Murray.  
*Third Prize:* W. Stelcik.

*Honorable Mention:* C. C. Boslaw, W. R. Bradford, Harry W. Cook, Martha Curry, Carroll M. Guest, Charles A. Hughes, W. T. Kempin, John E. Prior, L. Vinton Richard, Myra D. Scales, E. P. Tinkham, Anson M. Titus, Elliott Hughes Wendell, William J Wilson.

Special commendation is due the following workers for meritorious prints: O. C. Dean, G. C. Engard, E. A. Harrington, E. Hassan, H. J. Shipton, John Schork.

## Subjects for Competition

1916  
"Camp-Scenes." Closes November 30.  
"Flashlights." Closes December 31.  
1917  
"The Spirit of Christmas." Closes January 31.  
"Miscellaneous." Closes February 28.  
"The Spirit of Winter." Closes March 31.  
"Home-Portraits." Closes April 30.  
"Miscellaneous." Closes May 31.  
"The Spirit of Spring." Closes June 30.  
"Landscapes with Figures." Closes July 31.  
"Miscellaneous." Closes August 31.  
"The Spirit of Summer." Closes September 30.  
"Vacation-Pictures." Closes October 31



Photo-Era Prize-Cup

IN deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

## Animals in Art

AND why not animals in art? Why not pictures of cattle and horses and dogs and monkeys? Are they not just as perfect in their way as other forms of life? We have passed that stage of enlightenment that arrogated to the human form all the beauty of the world. We have come to recognize that there is something more to beauty than proportion, regularity and symmetry.

JOHN C. VAN DYKE.



HIGHLAND CATTLE

ALEXANDER MURRAY

SECOND PRIZE — ANIMALS IN LANDSCAPE

### The Spirit of Christmas

Advanced Competition — Closes Jan. 31, 1917

Who does not know that "feel in the Christmas air," the warm glow of fellowship and "good-will" that sets at naught the tingling cold associated with the season in our northern clime, and marks the time as one of friendship and brotherliness — a time when hand clasps hand, the world around, in a sympathy and renewed interest, that, could it be continued throughout the year, would go far toward bringing the millennium. One feels sorry for those who have left their childhood so far behind that they feel Christmas a bore, and no longer share the thrills and happy secrets entailed by thoughts and plans for the happiness of others. This will be the third Christmas that has been overshadowed by the dark clouds of the war in Europe, and our own Christmas-joy will hardly be full until we have done our share to bring some feeble rays of Yuletide-happiness to the numberless orphaned children of these stricken lands.

But, the "Spirit of Christmas"—how shall we capture it and bring it to others by our photographs? There are certain mental pictures that come unbidden when the thought of Christmas crosses our minds. Children; open fires; Christmas-trees; holly; mistletoe,

and the singing of carols — singly or in combination — these are the embodiment of Christmas to most minds, I fancy. To us Northerners there is also the picture of whirling snow outside, jingling sleigh-bells and bracing cold. Many of these subjects have been so often and so well done, that they are better not attempted unless one has a novel conception of an old theme, and is convinced that he has something new to say, or can say it better than his predecessors have done.

On the other hand, some of the themes have seldom been worked out satisfactorily, and present great difficulties to be overcome. Such a subject is the Christmas-tree. With its scattered lights and decorations, glittering tinsel and baubles — in violent contrast with the dark evergreen — it is, indeed, a hard problem. The position of the tree is apt to be a poor one for good photographic lighting, and if the kiddies are to be taken about the tree, an added difficulty arises. Perhaps the most satisfactory solution is a flashlight-exposure; but that solves only one side of the equation; one has still the "spotty lights" and confusion of interests to deal with. If the tree could be subdued in lighting, simply suggested, and the children featured most prominently, it might prove a solution. Here, at least, is a subject worthy of study — one that will stand a deal of working out, and prove a great satisfaction if portrayed



adequately. Christmas-eve subjects are manifold — the hanging of the stockings; watching for Santa Claus; preparing presents; filling the stockings, and many others that will come to mind.

The fireplace is always an appropriate accessory for Christmas pictures, with its suggestions of family-life, and as the proverbial private entrance of the holiday saint of the season — Santa Claus. If a flashlight can be used in the fireplace, giving the effect of evening and firelight, so much the better for the pictorial quality of the print. In the frontispiece of the issue of PHOTO-ERA for December, 1915, you have an example of the use of the fireplace in a Christmas-eve subject. "A Christmas-Eve Dream" was obtained, of course, by making a second short exposure without the figure.

By comparison with the cover of the December number in 1911, it will be seen how much greater is the pictorial quality of the picture when taken by means of the flash in the fireplace. The cover-picture, taken by daylight alone, is extremely photographic, whereas the other spurs the imagination and is, to that extent, more pictorial. Using the fireplace as a background, one might show the fond parents filling the little stockings with toys, or the children in the early morning light, stealing down to see what Santa has brought them.

Pictures might also be taken on the stairs, as the children creep down to investigate, or in the bedroom, with stocking hung on the bed-post or just being emptied of its contents. Any picture showing the children's happiness, or the parents' joy therein, should breathe the Spirit of Christmas.

But there is a snowily beautiful out-of-doors as well as a fire-warm indoors to invite our cameras at Christmas-time, and many are the charming subjects it offers us. Bringing home the Christmas-greens might be a very suggestive and jubilant theme to work out — either with young boys and a sled, or older girls with evergreen-laden arms. The boy-and-sled idea could be used in other ways — bringing home the tree or the big Yule log, as was the old English custom —

"Bring with a noise,  
Ye merry, merry boys,  
The Christmas-log to the firing."

Then the shopping-idea could be utilized, though that has been rather well done already, as witness Madame d'Ora's attractive shopper on PHOTO-ERA cover for December, 1912, and the very different interpretation of the same subject on last year's December cover. Madame d'Ora's clever suggestion of the lighted shops in the background is done splendidly. They help greatly to carry out the idea of the picture, but are so subdued that they do not obtrude themselves or detract from the main theme.

One might even find subjects in the stores themselves, especially at the toy-counter, where plenty of human interest would surely be obtainable. One dislikes to think of pathos in connection with the Spirit of Christmas; but alas! there is always a dark side to the joyous picture — and the wistful faces of little ones denied their share in the happy festival may often be seen gazing in at lighted windows or watching the throngs of more fortunate children. In last year's December number, W. J. Piper has caught this pathetic side in the picture on page 271 — entitled "His Christmas-Dinner." It is a hungry dog that forms the theme, but the wistfulness is there — although one does not see the eyes.

A comparatively new way of celebrating the day, for this country, is the municipal tree. In the tree itself, or the groups of carol-singing choir-boys, there should be picture-material for one with courage to attempt a difficult subject. In W. B. Post's "Christmas

Morning," on page 293 of the December, 1914, PHOTO-ERA, we have a splendidly rendered winter-landscape; but it might just as likely be January 25 as December 25 so far as anything about the picture, save the title, would indicate. Leaving all else as it is, had a figure been introduced in the middle distance, laden with either holly or packages, or in some way made to say, "Merry Christmas!" the Christmas-spirit would have been present, and the picture would fit its title.

Pictures of people just leaving church — the Yuletide good-will showing in their faces, and the sprig of holly, significant of the season, on muff or coat — would be legitimate subjects; or one might go inside the church and show the "Crib" or the Christmas-decorations, with one or two devout worshippers. The choir-boys in their vestments, or, more in conformity with this particular season, wrapped in cap and muffler, and singing outside some cottage-window, would be good material.

The object to be kept in mind, whatever theme is selected, is to get away from the stiff and stereotyped pose or arrangement — to strive for something fresh and spontaneous. Originality, imagination — these are the things that count with the judges. The chance snapshot may occasionally be of great artistic merit; but the chances are all against any such outcome. It is almost invariably the well-thought-out, carefully planned composition that tells its story best.

The amount of uplift and inspiration the beholder derives from our efforts is to a very large extent dependent on how much of ourselves, of our best effort and imagination, we have put into the making of it. If our work is so materialistic that it means to people simply a particular child in a definite spot, it has failed of its possibilities; for the art of the photographer, as that of the artist with brush or pencil — though, alas! in a less degree — is capable of suggesting to those who view it, childhood in general, with all its sweetness and *naïveté*. The beholder should not be prompted at once to inquire, "What child is that?" but should be subtly reminded of the children he knows and loves, and be content to accept it as a personification of childhood itself. Let us get the Spirit of Christmas in our hearts, and then our work will be permeated by its glow.

KATHERINE BINGHAM.

### Copying Large Objects Same Size With Small Camera

By way of example, suppose the worker to be limited to quarter-plate ( $3\frac{1}{4} \times 4\frac{1}{4}$  inches). It is clear that with this camera he cannot use a plate of larger size without something of the nature of a camera-extension, back or front. Let the original object be, let us say, 12 by 9 inches. With the quarter-plate camera, a negative is made in the usual way, showing the original as large as may be found convenient — say, 4 by 3 inches. Now, very accurate measurement is taken of the distance between the back-surface of the back-lens and the focusing-screen by cutting a narrow strip of stout card just to touch lens and ground-glass. The finished negative is now put into the enlarger, and the camera-lens used for enlarging. By means of the card-strip, the same distance between the negative and back-surface of lens is again secured. Focusing on the easel is now done, not by racking the lens in or out, but by shifting the easel to and fro. When the lens-to-easel distance is the same as the lens-to-object distance was, the size of the image will be the same as the original. Therefore, in order to arrive at this distance quickly, it is helpful to take a measurement-note of the distance the object was from the front-surface of the front-lens or lens-hood.—*The Amateur Photographer*.



ON THE SLOPE

W. STELCIK

THIRD PRIZE — ANIMALS IN LANDSCAPE

### The Permanence of Photographic Prints

It has been stated that bromide prints are as permanent as platinum. That is my own opinion. From fourteen to twelve years ago I made a number of platinum prints. Some are as good to-day as when I made them; but quite a number have faded or gone wrong. I have hardly a bromide print made before 1904 which has kept well. In that year I adopted a new system of washing prints (which I read of in this journal), and since that date my bromide prints, with very few exceptions indeed, have kept perfectly. The reason why so many bromide (including gaslight) prints go wrong is that so few of them are perfectly washed. I gave up platinum printing because on the average platinum prints have not so good an appearance as bromide prints. Given a perfect negative, and a perfect day for printing it, nothing can beat a platinum print. But as the average of bromide prints is better, there is every reason for using bromides if they are as permanent as platinum. When platinum prints go wrong, it is because they are imperfectly washed; and bromide prints go wrong only for the same reason. It is easier to wash a platinum print perfectly than a bromide, because the traces of hyposulphite stick in the paper (in my opinion) long after they have soaked out of the emulsion. Nothing will get all traces of hypo out of the paper on which bromide emulsion is spread except repeated squeezing. I wash all my bromide prints in this way. I have a piece of thick plate-glass. If I have twenty prints to wash, I make two piles of them, ten in each, face down; if thirty, then three piles, and squeeze out as much water as possible by rolling a squeegee over the pile twelve or fifteen times. Then the piles of prints are put back in the dish, and the running water from the tap soon separates the prints. They are then piled and squeezed again and again, until they have been piled and squeezed seven times. I used to do them only six times; but I occasionally test the water squeezed out with very dilute permanganate of potash, and I have found that it would be faintly discolored after the sixth time, and even after the seventh if there were fifteen or sixteen prints in the piles instead of

only ten. But with ten prints in a pile, seven squeezings of twelve rollings each will be found quite enough. I put down a coin at each successive squeezing, to keep count of the number.

This method of washing prints is more troublesome than leaving them in running water. But any one who leaves his prints for four hours, let alone the orthodox two, and will then pile them, squeeze them, and test the water squeezed out with permanganate, will receive a shock. He will no longer wonder why "bromides don't keep." But though more troublesome, it is quicker. Thirty prints can be washed perfectly in half an hour, and every one who adopts this method may have every confidence of his bromide prints lasting longer than he will.

H. M. UNDERHILL, in *The Amateur Photographer*.

### A Quick Way To Wash Small Roll-Film Negatives

THE other day the writer desired to wash, as quickly as possible, a strip of roll-film negatives taken with a small pocket-camera, and the following idea suggested itself. The strip of film was taken from the fixing-bath, and held film-side up, one end of the strip in the right and the other in the left hand, under the tap, so that one end was considerably lower than the other. A rapid stream of water from the tap was then allowed to flow down the entire length of the film, starting at the top immediately under the tap. The film was held so that it was hollow in the center, thus allowing a better passage for the water. After five minutes' fast washing, as described above, the drainings of the film were allowed to drip into a solution of permanganate, and indicated that no hypo was present. The above method is of special value at the present time, when most of us are busy, and shortens considerably the uninteresting business of washing.—R. M. F.

Young girl, to her youthfully dressed mother — "Please tell me, mother, how long I've got to wait before I can wear short dresses like yours."—*Fliegende Blaetter*.





# THE CRUCIBLE

A MONTHLY DIGEST OF PHOTOGRAPHIC FACTS  
With Reviews of Foreign Magazines, Progress and Investigation  
Edited by A. H. BEARDSLEY



## Printing Through Celluloid

IN connection with the use of celluloid in printing, a good many workers make use of thick sheets, either plain or with a matte surface, in order to get diffusion. They answer the purpose excellently; but a word or two of caution may be given as to the importance of keeping it clean—not merely visually clean, but chemically clean. An experience we had recently will show the need of this. A platinum print made through celluloid showed some strange markings which quite spoiled it. The celluloid was suspected and examined, but appeared perfectly clean, and the markings were attributed to defective paper, or possibly to some unnoticed scum on the developer. The next print showed absolutely identical markings, but upside down as regarded the picture itself. It was evidently due to the celluloid, then, which we must have reversed when examining it. The celluloid was given a thorough washing, and a third print made with it proved flawless. It is possible that this particular piece of celluloid had been used when printing on carbon tissue or by the oil process, and so had in some way become contaminated with bichromate.—*Photography.*

## Chrome Alum

CHROME alum is a salt which is met with in the form of dark violet crystals readily soluble in cold water. It is not so widely known as ordinary alum, which in some respects it resembles; but it is well worth a place on the chemical shelf of the photographer.

Although its name might be supposed to indicate that it is a compound of aluminium, this is not the case; it contains none of that element, being a sulphate of potassium and chromium. The utility of chrome alum is due to its action upon gelatine. Like potash alum, it hardens this substance and makes it less easily soluble in and less pervious to water.

A convenient strength in which to keep a solution of chrome alum is one of five-percent; but, if preferred, a ten-percent solution can be made up, as there is no risk in such a case of the salt crystallizing. As a matter of fact, a fifteen-percent solution can be made up and kept at ordinary temperatures; but there is no advantage in having it at this strength. The solution has a dull violet-purple color, not unlike that of the salt itself.

In making up a solution of this salt, it is best to crush the crystals and then to dissolve them in cold water. In hot water they form a greenish solution, which only passes to the ordinary or violet condition after the lapse of some days.

Owing to the powerful hardening-action which chrome alum has upon gelatine, it must be used cautiously. For instance, if it is being added to a solution of gelatine, as is the case in making a sizing-preparation to enable any ordinary paper to be used as a single-transfer support in carbon-work, the gelatine should be dissolved in part of the water only, and another part used to dilute the chrome alum solution before adding it. Even then, it should be added a little at a time, with stirring, or we may find that it has hardened the gelatine to such an extent as to throw it out of solution in the form of a stringy mass.

For hardening negatives, prints, etc., chrome alum may be used in place of the ordinary alum. Very much less of it is required, so that there is all the less in the shape of soluble matter to be washed out afterwards. The strongest solution that need be used for the purpose is of one-percent strength, although half of this is generally quite sufficient.

Owing to the great effect even of dilute solutions upon gelatine, it is not advisable to treat a negative or print with chrome alum if it is afterwards to be submitted to any process which requires the film to have its absorbent character, such as chemical intensification or reduction; it leaves it in so horny a condition that the process is interfered with. But if it is necessary to make the film insoluble even in very hot water, then chrome alum is much more effective than ordinary alum. Hence its use in preparing substrata and for similar purposes.—*Photography.*

## Toning Iron Blue-Prints

ACCORDING to Th. Sommer, if a platinum-black tone is desired, the print is bleached in the following freshly prepared and filtered bath:

Water .....	350 ccm.	10 ounces
Borax .....	8 grams	120 grains
Ammonia (stronger) .....	8 ccm.	$\frac{1}{2}$ ounce

Then place it in a saturated solution of gallie acid until the desired tone is obtained. Wash again and dry.

For violet-black tones the blue-print is first treated with a five-percent solution of borax and then placed in

Water .....	500 ccm.	1 pint
Tannin .....	15 grams	$\frac{1}{2}$ ounce
Gallie acid .....	15 grams	$\frac{1}{2}$ ounce

For sepia the following is used:

Water .....	100 ccm.	3 ounces
Tannin .....	4 grams	60 grains
Hydrochloric acid .....	8 drops	8 drops

For use, this solution is diluted to one part to fifty of water, and the print is immersed in it from one to five minutes; it is then washed and placed in a five-percent solution of potassium carbonate until the desired tone is reached.—*Photo-Welt.*

## Intensity of Illumination

THE intensity of light passing through a lens or pin-hole is proportional to the area of the opening through which it is admitted, the opening, in the case of a lens, being the diaphragm, or stop. It is also inversely proportional to the distance from the source of light of the surface receiving it, since the light obviously spreads out and becomes attenuated. The rule is, the intensity of illumination is inversely proportional to the square of the distance, but photographically this rule tends to break down if carried beyond certain moderate limits. The intensity is weakened when the light is made to cover a larger surface, as, for instance, if it strikes the plate at an angle instead of perpendicularly, which may happen when using the swing-back or swing-front.

*Cassell's Cyclopaedia of Photography.*



# BEGINNERS' COMPETITION



Closing the last day of every month  
Address all prints to PHOTO-ERA, Round Robin Guild Competition  
383 Boylston Street, Boston, U. S. A.

## Prizes

*First Prize:* Value \$5.00.

*Second Prize:* Value \$2.50.

*Third Prize:* Value \$1.50.

*Honorable Mention:* Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

A certificate of award, printed on parchment paper, will be sent on request.

*Subject* for each contest is "*Miscellaneous*"; but only original prints are desired.

Prizes, chosen by the winner, will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

## Rules

1. This competition is open only to members of the Round Robin Guild. Membership, however, is free to all subscribers; also to regular purchasers of PHOTO-ERA on receipt of their name and address, for registration, and that of their dealer.

2. All Guild members are eligible in this competition provided they never have received a prize from PHOTO-ERA other than in the Beginners' Class. Any one who has received only Honorable Mention in the PHOTO-ERA Advanced Competition still remains eligible in the Round Robin Guild Beginners' Competition; but upon winning a prize in the Advanced Class, one cannot again participate in the Beginners' Class. Of course, beginners are at liberty to enter the Advanced Class whenever they so desire.

3. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. **Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.** Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P., or black-and-white paper having the same gradations and detail.

4. *Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.* **Criticism on request.**

5. *Each print entered must bear the maker's name, address, Guild-number, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request.* **Be sure to state on the back of every print exactly for what contest it is intended.**

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit being given.

7. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with *double thicknesses of stiff corrugated board, not the flexible kind, or with thin wood-veneer.* Large packages may be sent by express very cheaply and with indemnity against loss.

## Awards — Beginners' Contest

Closed September 30, 1916

*First Prize:* H. B. Rudolph.

*Second Prize:* E. J. Brown.

*Third Prize:* Louis R. Murray.

*Honorable Mention:* James Allan, Charles F. Langer, Foster Lardner, Wm. F. Lindstaedt, Irving S. Lovegrove, William F. J. Lowe, L. W. Lyon, Henry L. Osborn, C. A. Pierce, A. C. Smith, M. C. Still, A. S. Upton, William J. Wilson, Elizabeth B. Wotkins.

Special commendation is due the following workers for meritorious prints: W. G. Adams, Margaret Anderson, J. Louis Cunningham.

## Why Every Beginner Should Compete

THE trouble with most competitions is that they place the beginner at a disadvantage. If advanced workers be allowed to compete, beginners have little chance to win prizes, and so quickly lose interest after a few trials.

There are two monthly competitions in which prints may be entered, with prizes commensurate with the value of the subjects likely to be entered. They are: The Round Robin Guild Competition and the PHOTO-ERA Competition. The former is the better one for a beginner to enter first, though he may, whenever it pleases him, participate in the latter. After having won a few prizes in the Beginners' Class it is time to enter prints in the PHOTO-ERA Competition for advanced workers.

As soon as one has been awarded a prize in the PHOTO-ERA Competition, he may consider himself an advanced worker, so far as PHOTO-ERA records are concerned, and after that time, naturally, he will not care to be announced as the winner of a prize in the Beginners' Class, but will prefer always to compete in the PHOTO-ERA Competition for advanced workers. In accordance with this natural impulse, it has been made a rule by the Publisher that prize-winners in the Advanced Class may not compete in the Beginners' Class.

To measure skill with other beginners tends to maintain interest in the competition every month. Competent judges select the prize-winning prints, and if one does not find his among them there is a good reason. Sending a print which failed to the Guild Editor for criticism will disclose what it was, and if the error be technical rather than artistic, a request to the Guild Editor for suggestions how to avoid the trouble will bring forth expert information. The Round Robin Guild Departments, including those of personal counsel and criticism, form an endless chain of advice and assistance if members will connect the links.

## Focal Length of Lantern-Lens

To determine the focal length of a lantern-lens, a writer in *Camera Craft* recommends the following easy method to determine the focal length of the objective of an optical lantern or stereopticon: Insert a slide with a circular mask having an opening three inches in diameter, and focus it upon the screen. Then multiply the distance, in feet, between the slide and the screen, by three, and divide the result by the diameter, in feet, of the disc on the screen. The result will be the focal length, in inches, of the lens in the lantern.



## A Winter-Pastime

ONE'S camera may be utilized in many pleasurable and profitable ways during the winter-months. One way to get fun out of it is by the making of silhouettes. This early and primitive way to produce likenesses has had quite a revival of late, and it is amazing how much of character and individuality can be obtained in this simple manner. There are many ways to produce silhouettes — some by straight photography and others entirely without its aid. To make them without a camera, place the sitter as near as possible to a wall on which has been fastened a piece of smooth, white paper. A strong light is then arranged so that a clear-cut shadow of the profile falls on the paper. This is traced as accurately as possible with a pencil. Having obtained the outline in this manner, there are two ways to finish the silhouette, both of which were used in the old specimens that have been handed down to us. One was to cut out carefully the profile from the white paper, leaving the white margin, which is then mounted over black paper or silk, the opening in the paper making the picture. The other method is to transfer the outline to a piece of black paper, and cut out as before, only in this case the piece cut out is the one to be used, and, when mounted on white, it produces the same effect as the previous method. Of course, by this method the image is approximately life-size, and an evening's sport may be provided by making fifteen or twenty of "prominent citizens" or friends, and having them numbered and shown on an easel to be identified by the company. A silhouette so made may be copied in the camera to any desired size, and prints made on a grade of paper that gives strong contrast.

Another way to make a silhouette utilizes the camera; yet it is not a photographic method. To employ it, the sitter may be posed on either side of a brightly lighted white screen. In one case, the shadow is thrown sharply upon the screen; in the other, the unlighted head is seen cutting against the luminous screen, so that on the ground-glass it gives simply the outline. The camera is focused sharply to give on the ground-glass an image of the desired size. The worker then places a piece of white tissue-paper over the ground-glass and carefully traces the image thereon. The subsequent operations are the same as for the life-size silhouette.

The third way is a strictly photographic one. To utilize it, some sort of tent-arrangement must be improvised in which the subject may be screened from the light. When the bust-view is the one desired, tall screens may be used. They should be placed far enough apart to allow the placing of a chair between, with room for the sitter at right angles to the camera. A heavy, dark cloth is thrown across the top to exclude all light, forming a dark tunnel, in the farther end of which the sitter is placed so as to be shielded completely from all light. Beyond the sitter, and at a distance sufficiently great to allow no shadow upon it, is placed a brilliantly lighted white background. The camera at the other end of the tunnel is focused sharply upon the sitter, and a very short exposure made with a rather slow plate.

Developing should be done with a strong developer, and one should work always for contrast. The print should be on a paper that gives strong contrast, and the image should be a dead black on a pure white ground.

To obtain the line at the base of the silhouette, a piece of black paper may be cut and glued to the plate, or opaque may be used. If your background is as dense as it should be, any difference in density between it and the paper or opaque will not print. The shape of this line is quite a study, and if one has the opportunity

to observe any number of old examples, it will be seen that it varies with the subject, and is graceful and carefully balanced, to give suitable support to the head. If a hand-camera is to be used for making silhouettes by this method, it will be necessary to use the portrait-attachment. The camera should be placed on a tripod or other rigid support, the attachment put in place and the distance measured accurately, according to the directions that come with attachment. If the light is reasonably strong on the background, the shortest exposure that can easily be given with the shutter set on B (bulb) should give enough time.

In the early examples, more than a simple bust-picture was seldom, if ever, attempted. But in these modern days most elaborate three-quarter and full-length poses are often shown. One of the most successful posters, advertising Maude Adams in "The Legend of Leonora," was a three-quarter silhouette showing the judge leaning over the high desk, while "Leonora" reaches her bouquet up to him. Many quaint costumes may be devised and original poses thought out — the chief essential in all is that the heads be in profile, if a likeness is desired. Some aid in carrying out costume, etc., may be had by using opaque on the negative. The collar in a silhouette of a man's head is a case in point.

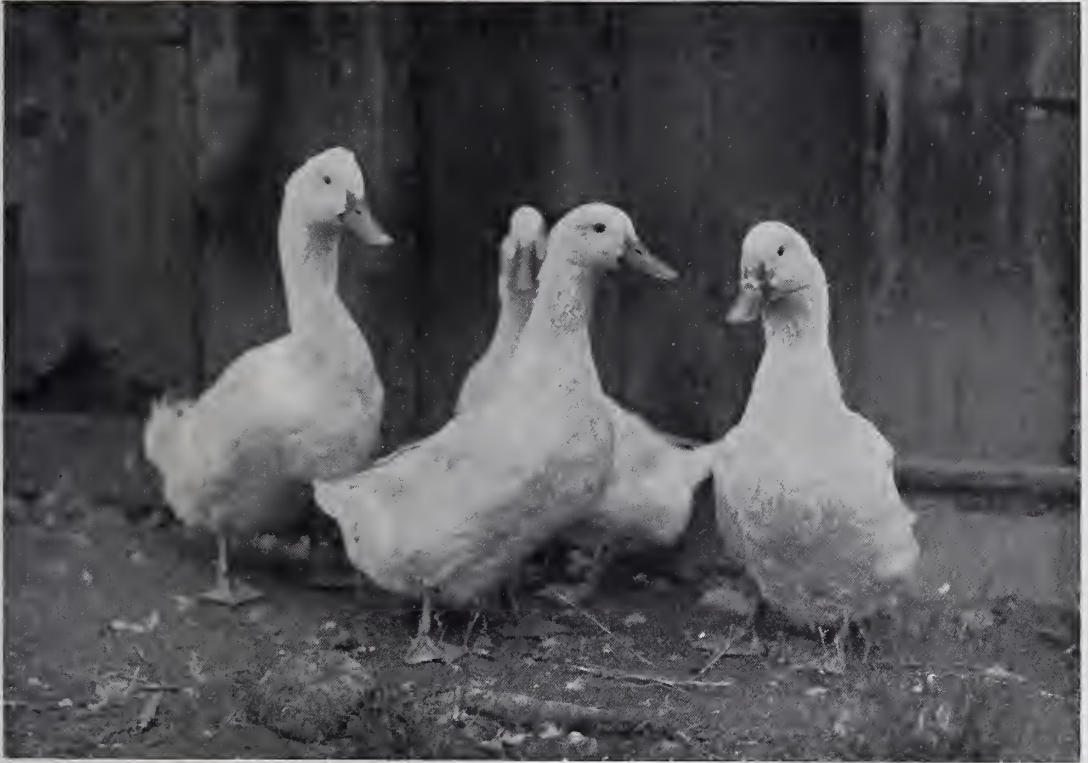
## Snow-Pictures

THERE are many amateur photographers who begin their camera-experiences in the winter-months, having become owners of their equipment at Christmas-time, perhaps, and who find their results anything but satisfactory. Either their snow is a blank expanse of white paper, and their trees inky black and without detail, or else the snow looks smudgy and gray, the whole print being flat and dingy.

The former case, perhaps, is less frequent, and is caused by underexposure and overdevelopment. It is not easy to underexpose snow-views, however, and a far more common cause of failure is overexposure. For an ordinary snapshot in summer, the instantaneous exposure (marked *I* on the shutter face) is used with the largest opening or stop. The stops are sometimes indicated by numbers 1, 2, 3, in which 1 is the largest. In the more scientific shutters, however, they are indicated by their proper system of markings, and run 8, 16, 32, 64; if the U. S. system is used, 1, 2, 4, 8, 16, 32, 64; or if the F system, 4.5, 5.6, 6.3, 8, 11, 22, 32, etc. When these numberings are used, the small numbers stand for the large stops just as in the 1, 2, 3 method.

For snapshots in summer, the exposure in ordinary circumstances is  $\frac{1}{25}$  second with U. S. 8 (F/11); but in winter, when everything is clothed in white, and the light is reflected from myriads of white surfaces, the next smaller opening can be used. In cameras where there is no way to regulate the shutter, except for instantaneous and time exposures, this is the only way to get around the difficulty. Of course, this applies to views in broad sunlight. If the sun is not shining, or it is very early or very late in the day, the larger opening should be used. It should also be used when the camera is pointed toward the light, and there are trees or other objects in heavy shadow.

The toward-the-light picture is especially well adapted to snow-subjects. A lawn or other seemingly smooth surface in a foreground, that under a broad light from behind the camera would photograph as a detailless spot of white, takes on a wealth of detail with the light from the other direction. Every little irregularity of surface casts a shadow that breaks up the even tone and gives variety and movement. The long shadows of trees, shrubs or flower-stalks, falling



HOLDING CONSULTATION

H. B. RUDOLPH

FIRST PRIZE — BEGINNERS' CONTEST

toward the camera, also add greatly to the variety and interest of the foreground.

In taking pictures that are classed as records, however, the light should strike the subject at an angle, not shining toward the camera, nor yet from directly behind it. If a group or single figure is to be taken against a background of snow, the face will show lighter if the head has a background of darker tone, such as evergreens or distant buildings. Work in the winter is a little more difficult than in the warmer months; but some of the results are well worth the extra effort.

KATHERINE BINGHAM.

#### Color-Sensitive Plates Without a Yellow Filter

THERE are at present on the market a number of orthochromatized plates whose coating has also received a yellow dye with the object of rendering unnecessary the use of a yellow ray-filter for quenching the excess of blue rays. The proper effect of the colors, however, cannot be obtained so well as by using a suitable yellow filter, as will be seen by the following observations. Let us suppose that the coating of such a dryplate consists of ten layers. The upper layer will correspond to a yellow filter which will absorb one-tenth of the blue rays; the second layer will correspond to a filter of two-tenths, and so on. Only when the action reaches the tenth or lowest layer will the action equal that of a full yellow filter. It is therefore clear that we will have a series of pictures covering each other of varying color-rendition, which will be

more nearly correct the deeper they are in the coating. Should the correct picture lie in the middle, the overlying layers will show a too strong and the underlying ones a too weak action of the blue. Now these extremes can perhaps be equalized in practice, but only where there is abundant exposure and the development reaches the bottom. Underexposure must always lead to a failure to shut out all the blue, and therefore an incorrect rendering of the light-values of the colors. This also occurs when the development does not reach the bottom layer.

Dr. Lüppo-Cramer bathed ordinary dryplates in the color-sensitizing solution recommended by Dr. König (200 ccm. water, 9 g. rapid filter yellow, 20 ccm. erythrosin solution 1 to 500), for five minutes, and then dried them. With these plates he made photographs of a Hübl color-table — the first with a short exposure, the second doubling the time and the third with four times the exposure of the first. The first showed the blue lighter than the yellow; in the second the blue was about equal in value to the yellow, but lighter than the green; in the third the blue was darker than the yellow, but about equal to the green. Only in a fourth plate, which was exposed forty times as long as the first, and was developed physically later, had the colors the same values as when seen by the eye. It will therefore be seen that the color-rendition approached nearer reality with extended exposure. Dr. Lüppo-Cramer draws from this that "it is necessary in all cases to give fullest exposure and suitable development to plates that have a yellow-filter coating." — *Photo-Wochenblatt*.



## ANSWERS TO QUERIES

*Subscribers and regular readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Correspondence Department, PHOTO-ERA, 383 Boylston Street, Boston, U. S. A. If a personal reply is desired, a self-addressed, stamped envelope must be enclosed.*

**P. W. D.—Transferring photographs to watch-dials** can be done by the collodion emulsion or the carbon process. But as this requires considerable technical skill, we recommend that you entrust the work to a reliable expert, such as The O'Hara Waltham Dial Co., Waltham, Mass., who would put the photograph on and make it permanent by baking it. The Carman Art-Company, 79 Dearborn Street, Chicago, do fine work by the carbon transfer process. The cost would be \$3.00; the Waltham firm's charge about \$9.00.

**R. U. A.—To ensure good cloud-effects in general landscape-work**, you need both an orthochromatic plate and a color-screen; one alone is not sufficient. Since you appear to prefer Seed plates, use Seed Orthochromatic, which are the same speed as the Seed 26x you now employ. Ordinary landscape-work does not require a screen so deep as your 10-time screen. A three- or four-time screen would be ample unless absolute color-rendering is a consideration, as in the photographing of furniture, paintings and similar commercial work. Try a Burke & James 3-time screen.

**H. W. S.—Taking pictures from an airplane** requires both nerve and unusual technical ability. The exposures must be very short because of the great speed at which the airplane travels and the veritable flood of light radiating in all directions. At a greater height than about four thousand feet, satisfactory pictures are almost unobtainable, as the particles of water and dust suspended in the atmosphere affect the definition of the picture. A two- or three-time screen is of great importance; and at great altitudes, where the blue of the sky is intense, a six-time screen will produce the best negative.

**T. S. H.—An aplanat lens** is one which is capable of good definition at a large aperture, because chromatic and spherical aberrations have been sufficiently corrected. The name is generally applied to lenses of the rapid rectilinear type. The aplanat is not an anastigmat lens.

**B. C. D.—An unsymmetrical anastigmat may be used for enlarging-purposes**, but it must be reversed so that the front lens, which, when used on an ordinary camera is towards the distant object, will be towards the bromide paper, whereas the back lens will be towards the negative. On this basis the lens will be employed under conditions similar to normal use in a camera, i.e., object *farthest* from the front lens and plate *nearest* the back lens. If an unsymmetrical lens is used for enlarging-purposes, with the front lens towards the negative in the usual manner, the fine spherical correction will be lost, and even a fair result can be obtained only by the aid of a small stop. The more rapid, the greater will be the defect.

**J. M. B.—A rapid symmetrical lens is a rapid rectilinear** with the front and back combinations of similar construction and of equal focal length.



"LET IT COME!"

E. J. BROWN

SECOND PRIZE — BEGINNERS' CONTEST



## PRINT-CRITICISM



Address all prints for criticism, enclosing return-postage at the rate of one cent for each two ounces or fraction thereof, to Correspondence Department, PHOTO-ERA, 383 Boylston Street, Boston, U. S. A. Prints must bear the maker's name and address, and be accompanied by a letter, sent separately, giving full particulars of date, light, plate or film, stop used, exposure, developer and printing-process.

M. C. S.—“The Path to the Old Mill” is an attractive subject, to which you have done full justice. The only exception is the proportions of the picture, and the halation of the foliage against a tensely white sky. The foreground is taken up by a sunlit path edged by foliage and shrubbery, and leads up to the old mill it-

omit the very dark-colored flowers and use only the white or light-colored ones, or *vice versa*? In either case the light should be controlled and full exposure given. Your picture is considerably underexposed. With the small stop you used, at least 25 seconds, or even 30 seconds, would have been better than the 2 seconds you gave.

H. E. W.—“A Hillside Path,” representing the trunk of an oak-tree at the right, and a path at the left with light trees and hillside in the distance, is exceedingly well composed, lighted and broadly treated. The values are very good indeed. There is just enough softness in the print to yield a very pleasing effect. In printing, the top part of the tree—which extends above and beyond the limits of the picture-area—could be made lighter, and logically so, as the branches which cast this heavy shadow on the tree-trunk are beyond the range of the picture. The mass of foliage, in the upper right-hand corner, near the tree-trunk, is needlessly black, and could be lightened to good ad-



GOLDENROD

LOUIS R. MURRAY

THIRD PRIZE — BEGINNERS' CONTEST

self. For this reason, the distracting and scattered mass of white and halated foliage should be modified, if not entirely eliminated. You may yet be able to correct this disfiguring portion of an otherwise very pleasing picture.

B. R. — Your “Path in the Woods” is very attractive, pictorially as well as technically. It is well balanced, although somewhat symmetrical; but the objects in the extreme distance are just as sharp as those in the foreground. The picture should have been focused so that the most distant objects were less sharp than those in the foreground—a gradual decrease of sharpness from the trees in the foreground to those most distant.

R. B. — Your flower-study shows no attempt at composition or harmony, the white and dark masses being scattered indiscriminately throughout the picture-space. Your problem is a very difficult one and should be avoided rather than chosen. Why not

vantage. With these modifications, made quite easily, the picture would improve immeasurably and be worthy a place in a photographic salon.

“An Autumn Morning” is very similar in construction to “A Hillside Path;” but contains a number of scattered masses of lights and blacks, thus marring the interest of the picture. It is not so well arranged as the other subject, and not in the same class with it—from a pictorial viewpoint. You have certainly a marked taste for pictorial composition, which, with more study and practice, will lead to better things.

W. H. S.—Your picture of oaks in diagonal perspective, made in the middle of August, is very good of the tree-trunks themselves; but the sunlight on the grass is dazzling white, without any detail or gradation. These masses of white resemble rather pure white snow, chalk or sugar, or any other white substitutes, but least of all do they bear any resemblance to grass.



# Photo-Era Exposure-Guide

Calculated to give Full Shadow-Detail, at Sea-Level, 42° N. Lat.

For altitudes up to 5000 feet no change need be made. From 5000 to 8000 feet take  $\frac{3}{4}$  of the time in the table. From 8000 to 12000 feet use  $\frac{1}{2}$  of the exposure in the table.

Exposure for average landscapes with light foreground, river-scenes, light-colored buildings, monuments, snow-scenes with trees in foreground. For use with Class 1 plates, stop F/8, or U. S. 4. For other plates, or stops, see the tables on the opposite page.

*These figures must be increased up to five times if the light is inclined to be yellow or red. ‡Latitude 60° N. multiply by 3; 55° × 2; 52° × 2; 30° × $\frac{3}{4}$ . ¶Latitude 60° N. multiply by 2; 55° × 2; 52° × 1½; 30° × $\frac{3}{4}$ . §Latitude 60° N. multiply by 1½; 55° × 1; 52° × 1; 30° × $\frac{1}{2}$ .   Latitude 60° N. multiply by 1½; 55° × 1; 52° × 1; 30° × $\frac{1}{2}$ .	MONTH AND WEATHER																				
	JAN., NOV., DEC. †					FEB., OCT. ‡					MAR., APR., AUG., SEPT. ¶					MAY, JUNE, JULY §					
	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	Bright Sun	Hazy Sun	Diffused Light	Dull	Very Dull	
HOOR																					
11 A.M. to 1 P.M.		$\frac{1}{32}$	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{32}$	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{50}$	$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{1}{60}$	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$
10-11 A.M. and 1-2 P.M.		$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{1}{2}$	$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{1}{2}$	$\frac{1}{40}$	$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{2}$	$\frac{1}{60}$	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$
9-10 A.M. and 2-3 P.M.		$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{1}{2}$	$1^*$	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$1^*$	$\frac{1}{40}$	$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{2}$	$\frac{1}{50}$	$\frac{1}{25}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{3}$
8-9 A.M. and 3-4 P.M.						$1^*$	$\frac{1}{5}$	$\frac{1}{2}$	$1^*$	$1\frac{1}{2}^*$	$3^*$	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{30}$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$
7-8 A.M. and 4-5 P.M.												$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{1}{20}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{3}$	$\frac{2}{3}$
6-7 A.M. and 5-6 P.M.												$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	$1^*$	$\frac{1}{15}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$
5-6 A.M. and 6-7 P.M.																	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{3}$	$\frac{2}{3}$	$1\frac{1}{2}^*$

The exposures given are approximately correct, provided the shutter-speeds are accurately marked. In case the results are not just what you want, use the tables merely as a basis and increase or decrease the exposure to fit the conditions. Whenever possible keep the shutter-speed uniform and vary the amount of light when necessary by changing the stop. Focal-plane shutters require only one-third of the exposures stated above.

**SUBJECTS.** For other subjects, multiply the exposure for an average landscape by the number given for the class of subject.

**1/8 Studies of sky and white clouds.**

**1/4 Open views of sea and sky;** very distant landscapes; studies of rather heavy clouds; sunset- and sunrise-studies.

**1/2 Open landscapes without foreground;** open beach, harbor- and shipping-scenes; yachts under sail; very light-colored objects; studies of dark clouds; snow-scenes with no dark objects; most telephoto-subjects outdoors; wooded hills not far distant from lens.

**2 Landscapes with medium foreground;** landscapes in fog or mist; buildings showing both sunny and shady sides; well-lighted street-scenes; per-

sons, animals and moving objects at least thirty feet away from the camera.

**4 Landscapes with heavy foreground;** buildings or trees occupying most of the picture; brook-scenes with heavy foliage; shipping about the docks; red-brick buildings and other dark objects; groups outdoors in the shade.

**8 Portraits outdoors in the shade;** very dark near objects, particularly when the image of the object nearly fills the plate and full shadow-detail is required.

**16 Badly-lighted river-banks, ravines, to**  
**48 glades and under the trees. Wood-interiors** not open to the sky.  
**Average indoor-portraits** in a well-lighted room, light surroundings.

**PLATES.** When plates other than those in Class I are used, the exposure indicated above must be multiplied by the number given at the head of the class of plates.

# For Perpetual Reference

For other stops multiply by the number  
in the third column

As all the figures in the table opposite are based upon the use of stop F/8, or U. S. 4, it does not appear here among the ratios for other stops.	U. S. 1	F/4	× 1/4
	U. S. 2	F/5.6	× 1/2
	U. S. 2.4	F/6.3	× 5/8
	U. S. 3	F/7	× 3/4
	U. S. 8	F/11	× 2
	U. S. 16	F/16	× 4
	U. S. 32	F/22	× 8
	U. S. 64	F/32	× 16

## Example

The factors that determine correct exposure are, first, the strength of light; second, the amount of light and dark in the subject; third, speed of plate or film; fourth, the size of diaphragm used.

To photograph an average landscape with light foreground, in Feb., 2 to 3 p.m., bright sunshine, with plate from Class 1, R. R. Lens, stop F/8 (or U. S. 4). In the table look for "Hour," and under the column headed "Bright Sunshine," note time of exposure, 1/16 second. If a smaller stop is used, for instance, F/16, then to calculate time of exposure multiply the average time given for the F/8 stop by the number in the third column of the table for other stops, opposite the diaphragm chosen. The number opposite F/16 is 4. Multiply 1/16 × 4 = 1/4. Hence, the exposure will be 1/4 second.

For other plates consult the table of plate-speeds. If a plate from Class 1/2 be used, multiply the time given for average exposure, F/8 Class 1, by the number of the class. 1/16 × 1/2 = 1/32. Hence, the exposure will be 1/32 second.

## Speeds of Plates on the American Market

Class-Numbers. No. 1, Photo-Era. No. 2, Wynne. No. 3, Watkins

Class 1/3, P. E. 156, Wy. 350, Wa.  
 Ilford Monarch  
 Lumière Sigma  
 Marion Record  
 Seed Graflex  
 Wellington Extreme

Class 1/2, P. E. 128, Wy. 250, Wa.  
 Ansco Speedex Film  
 Barnet Super-Speed Ortho.  
 Central Special  
 Cramer Crown  
 Eastman Speed-Film  
 Hammer Special Ex. Fast  
 Imperial Flashlight  
 Imperial Special Sensitive  
 Seed Gilt Edge 30  
 Wellington 'Xtra Speedy

Class 3/4, P. E. 120, Wy. 200, Wa.  
 Barnet Red Seal  
 Cramer Instantaneous Iso  
 Defender Vulcan  
 Ensign Film  
 Hammer Extra Fast, B. L.  
 Ilford Zenith  
 Paget Extra Special Rapid  
 Paget Ortho. Extra Special Rapid

Class 1, P. E. 111, Wy. 180, Wa.  
 American  
 Ansco Film, N. C.  
 Atlas Roll-Film  
 Barnet Extra Rapid  
 Barnet Ortho. Extra Rapid  
 Central Comet  
 Imperial Non-Filter

Imperial Ortho. Special Sensitive  
 Kodak N. C. Film  
 Kodoid  
 Lumière Film and Blue Label  
 Marion P. S.  
 Premo Film-Pack  
 Seed Gilt Edge 27  
 Standard Imperial Portrait  
 Standard Polychrome  
 Stanley Regular  
 Vulcan Film  
 Wellington Anti-Screen  
 Wellington Film  
 Wellington Speedy  
 Wellington Iso. Speedy  
 W. & W. Panchromatic

Class 1 1/4, P. E. 90, Wy. 180, Wa.  
 Cramer Banner X  
 Cramer Isonon  
 Cramer Spectrum  
 Defender Ortho.  
 Defender Ortho., N.-H.  
 Eastman Extra Rapid  
 Hammer Extra Fast Ortho.  
 Hammer Non-Halation  
 Hammer Non-Halation Ortho.  
 Seed 26x  
 Seed C. Ortho.  
 Seed L. Ortho.  
 Seed Non-Halation  
 Seed Non-Halation Ortho.  
 Standard Extra  
 Standard Orthonon

Class 1 1/2, P. E. 84, Wy. 160, Wa.  
 Cramer Anchor

Lumière Ortho. A  
 Lumière Ortho. B

Class 2, P. E. 78, Wy. 120, Wa.  
 Cramer Medium Iso.  
 Ilford Rapid Chromatic  
 Ilford Special Rapid  
 Imperial Special Rapid  
 Lumière Panchro. C

Class 3, P. E. 64, Wy. 90, Wa.  
 Barnet Medium  
 Barnet Ortho. Medium  
 Cramer Trichromatic  
 Hammer Fast  
 Ilford Chromatic  
 Ilford Empress  
 Seed 23  
 Stanley Commercial  
 Wellington Landscape

Class 5, P. E. 56, Wy. 60, Wa.  
 Cramer Commercial  
 Hammer Slow  
 Hammer Slow Ortho.  
 Wellington Ortho. Process  
 W. & W. Process Panchromatic

Class 8, P. E. 39, Wy. 30, Wa.  
 Cramer Contrast  
 Cramer Slow Iso.  
 Cramer Slow Iso. Non-Halation  
 Ilford Halftone  
 Ilford Ordinary  
 Seed Process

Class 100, P. E. 11, Wy. 3, Wa.  
 Lumière Autochrome





## OUR ILLUSTRATIONS

WILFRED A. FRENCH



OUR Easter cover, a combination of photography and architectural decoration, was received with so much favor by our readers, that the Publisher resolved to prepare a similar design for the December issue, one suggesting the Christmas-spirit. Again Katherine Bingham furnished the photograph, which, pasted on a plain white mount, was given to Horace J. Phipps & Co., of Boston, makers of memorial windows, with the request to give it an appropriate setting in the Gothic style. That the work was done with exemplary skill and taste, is self-evident. The picture is repeated on page 271.

The portraits by Norman Butler, one and all, have the impress of the artist's personality — animated, vigorous, unfettered — conventionally consistent and interesting. There are obvious reasons for what he is doing — no hazzarded pose or look, yet no deliberated preparation, but quick, sane action. Mr. Butler is evidently a man of energetic industry, who accomplishes much and lets no grass grow under his feet. Data: Inez Milholland Boissevain, the noted suffragist — December 15, 1915, 10 A.M.; clear light, north window, city-apartment;  $\frac{8}{10}$  Century View-Camera; 15-inch Smith Semi-Achromatic; stop, F/8 or F/11; platinum print.

"Look What He's Doing!" page 256 — December 17, 1915, about 2.30 P.M.; clear light, south; 12-inch Smith S. A.; stop, F/6.

"Bow Wow!" page 257 — March 3, 1916, 2.30 P.M.; Smith lens; stop, F/6; clear light, west-window, city-apartment; quick bulb-exposure.

"Baby Breneiser," page 258 — March 3, 1916, 2 P.M.; Smith lens; stop, F/6; clear light, west-window, city-apartment; quick bulb-exposure.

Seed Orthonon Non-Hal., pyro developer and platinum E. B. used in all this work.

"Supper-Time," page 264, is one of the interesting series of pictures made from a spot in front of his home in the city, by Fred Sutter, which illustrated an engrossing and instructive essay, published in August PHOTO-ERA, 1915. It shows simply that the right man can make a pleasing and well-balanced picture, be the conditions what they may. Data: January 26, 1915, 5.45 P.M.; no daylight left, only one arc-light burning; 4 minutes' exposure; 4 x 5 camera; No. 2 Darlot R. H.; 9-inch focus; stop, F/11; Seed 30; M. Q. tubes, 4 x 5 Cyko print.

One of the most attractive pictures at the New England Convention, held last September, was "At the Harp," by E. L. Byrd, page 265. It is a thoroughly consistent genre, soulful, as becomes the harpist-model, who is usually a young woman of engaging presence and who, as in this case, poses with exceeding grace. Data: Voigtlander portrait-lens; 5 x 7 Stanley plate; pyro; Artura print.

The fire-scene, depicted by A. J. Tessier, page 266, is animated and effective. Though the smoke is apparently not yet under control, Mr. Tessier's camera certainly was. The result is eminently satisfactory, in every way. Data: 5 x 7 Premo camera; 8 $\frac{1}{4}$ -inch Goerz Dagor, F/6.8, used at full opening; June 14, 1914, 5.30 A.M.; very poor light; 5 x 7 dryplate used; pyro; 5 x 7 print on Glossy Velox, M. Q. developed.

The photography of statuary, treated so ably by

W. W. Klenke in PHOTO-ERA for April, 1913, and forming the subject of a very successful competition (see PHOTO-ERA, 1911), is an activity that merits more attention from photographers than it has received in the past. Besides being a source of much satisfaction and potential profit, this work is a wonderful preparation for lighting and modeling in portraiture, and forms a special, important course in European schools of photography. A remarkably successful example of statuary-photography is "Mignon," by S. Almqvist, of Helsingborg, Sweden, page 267. Not only is the eye attracted to the beautiful play of light and shade — no dazzling highlights or opaque shadows, but a full scale of quotations — but held captive by the beautiful figure of a young girl, in an attitude of graceful repose. Mignon — as every one familiar with German literature knows — was an Italian maiden in Goethe's "Wilhelm Meister's Apprenticeship," represented as petite of figure and incomprehensible, yet beautiful and full of sensibility, and secretly in love with Wilhelm, her protector, who feels for her nothing but kindness and compassion. She at last becomes insane and dies, the victim of her hopeless attachment. Azeilin, a French sculptor, is the author of this exquisite marble statue; also of "Psyche," a pensive, seated figure in the Luxembourg Museum, Paris. The statue of "Mignon" is in Helsingborg, Sweden. High praise is due Mr. Almqvist for the extreme skill and taste displayed in photographing the beautiful work of art.

Katherine Bingham, editor of our pictorial competitions, is the author of a number of delightful seapieces, of which "The Outgoing Tide," page 268, is an example. Miss Bingham is one of the most versatile professional workers in this country — successful in all that she undertakes.

The picture of Burrud, the motion-picture camerist, and his Mexican guard, page 269, is a very successful piece of photography, considering the danger and excitement under which it was made. As data are lacking, the reader will derive satisfaction from the accompanying narrative. PHOTO-ERA is indebted to the Century Company for the use of the halftone.

Original and attractive in pictorial design, and perfect in all that pertains to technique, Mr. Castner's landscape, page 270, merits a conspicuous place among the masterpieces of winter-photography. The point of view has been chosen with rare artistic judgment, and the management of the chiaroscuro shows complete mastery of technical resources. The whole range of tonal values is a delight to the eye.

"Christmas-Morn," by Katherine Bingham, page 271, has already been mentioned in connection with this month's cover-design.

From his well-filled cabinets, G. R. Ballance, of San Mamette, on Lake Lugano, sends a number of views of the famous Dolomites — taken, of course, before the present war — of which the gem is presented on page 273. This beautiful and geologically remarkable region is not many miles distant from the scenes of sanguinary conflicts between the Austrians and Italians. With his clear understanding of mountain-scenery, its changes and moods, Mr. Ballance has solved the atmospheric mystery of these gigantic limestone blocks, and by means of his wonder-camera has produced the most

## Advanced Workers' Competition

attractive series of pictures of the Dolomites of which PHOTO-ERA has knowledge. The entrancing beauty of his effects of sunlight and atmosphere, and his mastery of pictorial composition, have given an artistic distinction to his Alpine scenery of Central Europe not matched by those of any other camera-artist.

The picture on page 273 represents the church of Colfosco relieved against the Sella group, in the province of Tyrol. The latter is one of the most northerly of the Austrian Dolomites. Its highest peak, Boés Spitze, 10,340 feet high, lies about twenty-three miles almost due east of Botzen, and about ten miles northeast of the Rosengarten group. The little village of Colfosco lies at its northern base, at an altitude of 5,400 feet. It is in the highest and most picturesque portion of the Corvara Valley, an offshoot of the Enneberg Valley, also known as the Gader-Thal. The inhabitants of Colfosco, also known as Kollfoschg, use the "Ladin" language as their native idiom, though many of them also speak German. The little church is quite typical of those found all through that section of Tyrol, and is an excellent example of the oriental influence transmitted through Venice to that whole region.

The long-anticipated spirit of Christmas is here, and here with all its manifold joys and occasional momentary sorrows, as depicted by Miss Reinecke on page 275. This is no laughing-matter — to mar the happiness of defenseless little ones around the festive Christmas-tree. Peace should be allowed to prevail among the beneficiaries of "Santa's" bounty. The fortunately passing grief of young America, as he misses a particularly brilliant block, is well expressed, as is also the interesting episode in a probably larger scene of gaiety and good cheer.

Like the fragments of an old English Abby, an old Greek Temple in ruin and decay, as may be found in Southern Italy, is more picturesque than it was when first erected. The camerist so fortunate as to have journeyed in these remote regions, and to have returned with personally made photographs thereof — like our contributor, E. C. Day — is to be envied. Indeed, he deserves to be complimented on the artistic judgment and skill in perpetuating a scene as strikingly picturesque as on page 276, although, it is true, too strongly emphasized (overcorrected) to be true to nature. Data: July 1, 1913, 1 P.M.; sun with cloud; No. 3 (3¼ x 4¼) Kodak; Eastman N. C. Film; 5½-inch R. R. lens; stop, U. S. 4, slow instant. exposure; 5-time ray-filter; enlarged glossy print, as on page 276.

What painter would not envy Mary L. Smith her ability to produce so animated and pleasing a child-portrait as decorates page 278. The juvenile portrait from the brush of the average professional painter resembles a wooden image more than it does the expressive and graceful model. It's an old story, and sensible easel-artists appreciate the superior portrait-work of the photographers of children, of which the women form a large, if not the largest, portion. Miss Smith has certainly portrayed the joy, innocence and charm of childhood in a masterful composition. Her picture is wholesome in treatment, and reveals the original resourcefulness of the artist.

Louis Fleckenstein, the successful portrait-photographer of Los Angeles, cannot forget that he was graduated from the carefree school of amateur photography, in which he was accustomed to pick his subjects whither fancy would take him. He still seeks occasional diversion in fields where lie picturesque themes, as "Diverted Attention," page 280, amply testifies. Data: August, 3 P.M.; sunlight; 5 x 7 Premo; 14-inch "Smith;" stop, F/8; ½ second; Polychrome plate; Rodinal; 5 x 7 Azo print for half-tone.

To let PHOTO-ERA readers share a family secret — and have n't they a right to know the character of the monthly competitions? — I have taken them into my confidence on previous occasions, so why not this time?

The entries in the "Animals in Landscape" contest were numerous but disappointing. Editor Katherine Bingham, in her advance elucidation of the subject, stated that it was animals, and not the landscape, that should dominate the picture. In "Landscapes with Animals," the case is different; there the animals are subordinated to the landscape. Therefore, pictures that did not conform to the requirements as thus set forth received no official recognition, although the jury decided in favor of a picture by Alexander Murray, without, however, bestowing the highest award. When they announced "Animals in Landscape," the Editors realized the difficulty of the subject — the management of the open-air models with the view to securing harmonious groupings and a pleasing combination of animals and landscape. But they knew the industry and determination of the average camera-enthusiast, and the stimulus that accompanies the quest for an object that has the element of uncertainty. They also knew that, with skill and perseverance, successful pictures of the character suggested could be secured. But they did not think that there were camerists who could be satisfied with pictures containing fragments of animals, or in which cattle or sheep were represented as running about promiscuously. In some instances the subjects were seen standing in a field of ox-eye daisies, which, viewed in receding perspective, produced masses or patches of dense white running across the picture, and formed a disquieting and objectionable effect. In other cases, the landscape-setting was extremely attractive and appropriate, but the subjects — cows, sheep or horses — were grouped inartistically or were left to roam about at will. Some entries, presumably "first-attempts," bordered on the ludicrous. Here, at the extreme margins, would be seen the hind-quarters of a cow or a horse, when it probably never occurred to the embryonic artist to trim off these anatomical fragments for the sake of artistic harmony. But may he live and learn!

"Highland Cattle," page 283, has the unusual effect of a painting or a fine steel-engraving — true, at least, of the original print. Here, the interest is divided equally between the animals and the setting, and neither yields to the other in pictorial attractiveness. The light in these woods is feeble, yet clear and evenly distributed. The picture, in its rich low tone, exerts a mysterious charm and, together with its feeling of calm repose, is pleasing to contemplate. Data: July, 4 P.M.; good light; 4 x 5 Premo; 6½-inch Bausch & Lomb Special Universal, at F/16; ½ second exposure; 4 x 5 Imperial S. R. Plate; Amidol, in tray; 6½ x 8½ enlargement on P. M. C. No. 2.

Sheep ascending a slope is a subject that has been treated many times before, yet Mr. Stelcik, in the arrangement of his picture, page 285, is quite unconventional, and unconsciously so. One admires the effect of light on the two groups of sheep, and the two-part background. The picture with a degree of novelty fills the space admirably, and here, as elsewhere, Mr. Stelcik has given convincing evidence of his true artistic temperament. Data: July, 4 P.M.; bright light; 5 x 7 Conley camera; 8-inch R. O. lens; stop, F/8; 1/100 second; 5 x 7 Standard Orthonon; pyro in tray; 5 x 7 Azo A.

(Continued on page 298)





# ON THE GROUND-GLASS

WILFRED A. FRENCH



## A Sensational Resemblance

THE large portrait of Dr. Karl Muck, conductor of the Boston Symphony Orchestra, by George J. Kossuth, of Wheeling, W. Va., which was in the Grand



RICHARD WAGNER

FRANZ HANFSTAENGL

*Miss C.* — "No; I have n't the least idea what it means."

*P. E.* — "Well, then; here's a good illustration. You were at Mrs. A.'s house-party, if I remember rightly."

*Miss C.* — "Indeed, I was, and had an elegant time."

*P. E.* — "Well, here's what I saw. I was standing leisurely in the hallway, below the stairs that go up to the second floor, and happened to glance in the direction of the large, glazed picture that hangs opposite the first landing. Standing where I was, and looking upward at the picture, I saw reflected there a far more



DR. KARL MUCK

GEO. J. KOSSUTH

Portrait Class of the recent New England Convention, attracted considerable attention. It occurred to but few of those who saw this excellent profile that it suggested a similar one of Richard Wagner, of whose operatic works Dr. Muck is a masterful interpreter.

The second day of the convention saw the familiar Wagner portrait, a photograph from life by Hanfstaengl, of Munich, hang beside Dr. Muck's portrait. Result — an immediate sensation, much speculation and consequent affirmation. Of all the eminent living musicians of Germany, Dr. Muck is, perhaps, the only one who is entirely smooth shaven. It may be that, proud of his resemblance to the great German composer, he wishes to emphasize it in this way.



## The Angle of Reflection

*Miss C.*, beginner, to photographic expert — "I read now and then about the so-called angle or line of incidence and of reflection. Can you explain this to me?"

*P. E.* — "Have you ever studied optics?"

interesting picture. About half-way up the stairs sat a young couple acting as if nobody saw them. The gentleman, encouraged by the semi-darkness overhead, was quite demonstrative in his attentions to his charming companion, who seemed to enjoy the fun."

*Miss C.* — "Oh, were n't you mean to watch us! (After her seeming indignation had subsided) But what has your detective-work got to do with optics?"

*P. E.* — "Just this. An imaginary line from your sweet self, just where you sat, to the picture below which acted as a mirror, would be the line of incidence. Quite an incident — pardon me! And a line from that reflection down to my innocently observing eye, the line of reflection."



## EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication



### A. H. Beardsley Tendered Farewell Luncheon

A. H. BEARDSLEY, former advertising-manager of the C. P. Goerz American Optical Company, of New York City, was tendered a farewell luncheon at the Hotel McAlpin, New York, by the management of the company, represented by Mr. Fred Schmid and Mr. Henry J. Hengsbach. The occasion was the departure of Mr. Beardsley for Boston, to join the editorial staff of PHOTO-ERA MAGAZINE. This tribute reflects credit upon Mr. Beardsley and the company with which he has been associated.

### Garó's Wonderful Show of Portraits

"Is n't it wonderful what photography can do!" exclaimed an eminent art-critic, after he had admired the collection of sixty gum-portraits by John H. Garó that were exhibited at the Boston Art Club, several weeks ago.

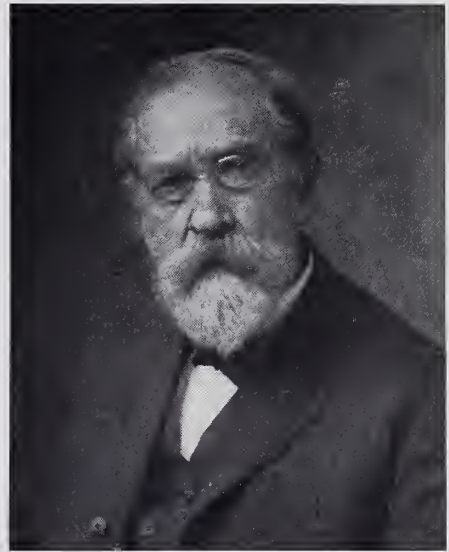
"You mean — what a photographer can do," quickly replied the Editor, who overheard the dubious compliment paid to the genius of one of the world's foremost camera-artists. Then followed a brief exchange of arguments, the art-critic lowering his colors at his opponent's decisive remarks: "Other photographers who use the same apparatus and materials seem quite unable to produce results like these. It 's the man behind the gun who is responsible for the telling shots."

The display was remarkable, first, that it was composed of portraits of men prominent in the professional, art and mercantile life of Greater Boston — painters, sculptors, architects, musicians, jurists, financiers, publishers, merchants, journalists and authors — an aggregation representing intellect, power and wealth. Second, diversified as were the activities and the personalities of the individuals portrayed, each was, so to speak, a distinctive and highly individualized type, made so by the interpretive genius of the artist. By using the multiple-gum process, Mr. Garó has at his command a means of artistic expression that, in his hands, is searching, flexible and effective, and enables him to produce pictures which, though in monochrome, rival in subtlety, power and impressiveness the finest work of the painter. In accuracy and beauty of modeling and anatomical truth, alone, these gum-portraits of Mr. Garó's would seem to have the effect of discouraging the professional portrait-painter, to whom they appear as a revelation of an entirely new art. Conventional lighting was thrown to the winds. Unusual but legitimate plays of light were utilized to bring out individual traits of character and expression, whether executive force, imagination, combativeness, cynicism, vacillation or sensuality. They were, withal, masterly in composition and treatment, and with adequate attention to important details. The management of the hands and of the usually obtrusive collar and cuffs showed judicious control in matters of technique. In the short space of this notice, it is impossible to dwell upon the special merits of each of this remarkable series of portraits; but among those that stood out among the rest, by reason of particular traits of characterization and technique, were John J. Enneking, Professor Hugo Muensterberg, the late Rev. Edward Everett Hale, Hon. Samuel L. Powers (president of the

Boston Art Club), Philip Little, Clarence Barron, Professor Albert Bushnell Hart, Moorfield Storey, Prof. George H. Bartlett, Dr. Karl Muck and Ivan Morawski. Thus the season of 1916-17 at the Boston Art Club was opened quite auspiciously, and however brilliant the exhibitions that are to follow, they cannot dim the beauty and solid merit of the Garó gallery of portraits.

### Augustus Marshall

AUGUSTUS MARSHALL, Boston's oldest photographer, died November 2, at his home in Newton, Mass., after an illness of a week. He was about eighty-one years of age. He made his first pictures in 1858, and, until quite recently, had been at work at his studio, 16 Arlington Street. He first started in business in 1860, at 63 Court Street, at a time when there were listed in the Boston City Directory fifty daguerreotypists and twelve photographers. Mr. Marshall took pictures of many of the celebrities that lived in Boston, as well as many distinguished visitors, among them Henry Wilson, Oliver Wendell Holmes, Theodore Parker, William Morris Hunt, Teresa Carreno, then a child-pianist, and John B. Gough.



A. MARSHALL

CLEMENTINE E. MAHN

During the Civil War, Mr. Marshall took pictures of many famous soldiers, and his gallery has been regarded as of high historical interest. In the seventies, he made a specialty of portraits on porcelain plates, which enjoyed great popularity. Despite his advancing years, Mr. Marshall maintained a high artistic standard, his portrait of Walter Brackett, the painter — published in PHOTO-ERA several years ago — being recognized by artists, generally, as a masterpiece in portrait-characterization.



## Our Illustrations

(Continued from page 295)

### Beginners' Competition

H. B. RUDOLPH begins this month's competition with a rare artistic achievement, page 289. The first thing that impresses the discriminating observer is the remarkably felicitous grouping of the white-feathered models, quite suggestive of a quacking conference. The truthful rendering of the downy texture of the birds is one of the technical excellences of this extremely successful picture. Data: August, 5 P.M.; hazy; 5 x 7 Graflex; 8 $\frac{1}{4}$ -inch B. & L. Zeiss Tessar; stop, F/4.5;  $\frac{2}{5}$  second; Stanley; hydro-metol in tray; enlarged on P. M. C. No. 6.

There is something irresistible in the portrayal of a child at play, as in E. J. Brown's genre, page 290. The attitude of expectation as expressed by look and gesture, has been rendered very successfully. The lack of brilliancy or snap is due, probably, to short development or to the use of an inadequate printing-medium. Data: June; good light; 4 x 5 Graflex; 10-inch Ic Tessar; stop, F/4.5;  $\frac{1}{100}$  second; 4 x 5 Standard Orthonon; M. Q.; enlarged on P. M. C. Bromide paper.

A very pretty combination of wild-flower and butterfly has been pictured by Louis R. Murray, on page 291. The application of a dark background to set off the objects, adds greatly to the effectiveness of the composition. Data: September 1, 1916, 2 P.M.; 5 x 7 Premo; 9 $\frac{1}{2}$ -inch R. R. lens; stop, U. S. 16; Ingento C ray-filter; cast-window, sunlight outside, but through window; 3 minutes; 5 x 7 Standard Orthonon; E. K. pyro-soda in tank; Enlarging Cyko print.

### New Distinction for Dr. J. M. Eder

THE excitement and stress consequent upon the European war do not seem to obstruct progressive activities in the field of science. PHOTO-ERA has just been informed, from Vienna, that Court-Councillor Dr. Josef Maria Eder has been recently made a member of the department of the Mathematical Physical Class of the Imperial Academy of Science, at Vienna.

Dr. Eder has for many years been the director of the Royal Imperial Graphic and Technical School and Research Institute, and also professor at the Royal Imperial Technical High School in Vienna.

Honors such as these may not mean much to American minds; but among the actively progressive and scientific countries of Europe, where solid achievements are appreciated at their full value, their recipients sometimes consider such honors as the crowning success of their life's labors in their particular field of activity. Dr. Eder, more than any other living individual, has devoted himself assiduously and successfully to research work in photographic science, and deserves all the honors that may be bestowed upon him.

### New Haven Camera Club

- Dec. 7. Regular business-meeting and interchange of lantern-slides.
- Dec. 14. "Bromide-Enlarging," demonstration by Dr. T. S. Bronson.
- Dec. 21. "Insect-Photography," Mr. B. H. Walden.
- Dec. 28. "Toning Lantern-Slides," Mr. H. D. Vincent.  
FRANK R. LAWRENCE, Secretary.

Lottie—"He wore my photograph over his heart, and it stopped the bullet."

Lottie—"I'm not surprised, darling; it would stop a clock."—Sketch.



## BOOK-REVIEWS

*Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices. Send for our list of approved books.*

THE CAMERA-MAN—His adventures in many fields, with practical suggestions for the amateur. By Francis A. Collins. 12mo, 325 pages, 32 full-page illustrations (original photographs). Price, cloth, \$1.30 net. New York: The Century Co.

"The Camera-Man" is a book that every camerist should read—one that deals with the exploits and experiences of a daring motion-picture photographer in perilous situations on Mexican and European battlefields. This hero of many thrilling adventures, an expert in every branch of photography, tells his story in a frank and delightful way and with scrupulous accuracy. We have, ourselves, yielded to the charm of Mr. Collins' book, and with pleasure reprint—elsewhere in this issue—typical episodes of the camera-man's activity in foreign lands. The volume abounds in practical work of interest to the amateur eager to enter the fascinating and profitable field of kinematography, and its author explains freely the methods that brought him success and fame. He tells how the motion-picture camera is used on the firing-line, in the trenches, in the air, at sea and elsewhere, and explains the news-value of the results obtained.

The book thus answers accurately important questions propounded by amateur camerists eager to know, from an authoritative source, the secrets, possibilities and professional value of motion-picture photography.

### The Annual Pittsburgh Salon

THE Annual Pittsburgh Salon of Pictorial Photography will be held in the Art-Galleries of the Carnegie Institute, Pittsburgh, Pa., March 1 to 31, 1917, inclusive.

All prints submitted will be passed upon by an impartial and thoroughly competent Committee of Selection. Prints that possess the highest merits in artistic expression and execution will be hung.

The Pittsburgh Salon is distinctive in its annual exhibitions, being held in the spacious galleries of the Carnegie Institute.

Entry-blanks, containing full information and conditions of the Salon, may be obtained by addressing C. E. Beeson, Secretary, 1900 Frick Building, Pittsburgh, Pa.

Last day of entry, Saturday, February 10, 1917.

### Novel Use of the Wide-Angle Lens

A MAN of tremendous size, tall and broad, entered the Brazier studio, recently, to have his photograph taken. Surveying the huge proportions of his customer, the photographer said, good naturedly: "This is where my wide-angle view-lens will come in mighty handy."

"You remember the portrait of Mr. A. in the Garo show at the Boston Art Club, not long ago?"

"Indeed, I do; but I did n't care for the subject."

"It was true to the life."

"I know it was; but it lacked character."



# WITH THE TRADE



## Useful Tables for the Photographer

A NEW edition of "Useful Tables for the Photographer," issued by the Bausch & Lomb Optical Company, Rochester, is now ready for distribution. The portrait-photographer will find valuable tables, covering angles of view, hyperfocal distances, stop-systems, image-heights at varying studio-distances, lens-notes and other practical information. A request for this helpful booklet will receive prompt attention.

## E. L. Hamilton with Wollensak Co.

MR. E. L. HAMILTON, for some four or five years connected with the Kansas City Photo-Supply Co., has been appointed assistant-manager of the Promotion of Trade Department of the Wollensak Optical Company, of Rochester, N. Y. Mr. Hamilton is a progressive and most congenial sort of fellow, well versed in the photographic industry, and the bulk of his work will be to travel in the interest of the Wollensak Optical Company through the middle and far West. Mr. Dawes, manager of the Promotion of Trade Department, will spend most of his time in Rochester, as pressure of business demands his presence there.

## Fredol, a New Developer

A NEW developer has recently been placed upon the market by Burke & James, Inc., of Chicago, called Fredol. A prominent Boston photographer, of acknowledged chemical ability, reports that he used Metol for part of an order, then he substituted Fredol (in the same formula) to finish his work. The completed order was uniformly excellent, in every respect. We understand from reliable sources that Fredol is meeting the requirements of photographers who use and appreciate a strictly first-class product.

## Artatone, the New Printing-Paper

It was with pleasure that we read the attractive booklet, "Artatone for Prints and Enlargements," issued by the International Photo-Sales Corporation, 9 East 40th Street, New York City. It is as much out of the ordinary in a typographical sense as Artatone prints and enlargements are in a photographic sense. Workers who desire a most expressive and artistic printing-medium, should send for this new booklet. Orders for Artatone may be sent direct, or placed through dealers. See advertisement.

## Snow-White

No more practical article for the amateur and professional worker has been written on the use of white writing-fluid than by William S. Davis, in this issue. It not only exhausts the possibilities of applying this indispensable commodity, showing in detail how the diversified work may best be done, but its author is frank enough to recommend as the best preparation of its kind on the market, "Snow-White," made and sold by J. W. Johnston, of Rochester, N. Y. The Publisher himself does not hesitate to endorse Mr. Davis' opinion.

## Herman & Herman, Inc., Extend Service

HERMAN & HERMAN, INC., manufacturers of chemicals, are actively extending their foreign service. On November 4, one of the vice-presidents, Mr. T. Ono, sailed for Japan to open offices in that country, and also to take charge of Herman & Herman's business in the Far East. His headquarters will be in Osaka. On the same day, Mr. George W. Fiske — another officer of the company — sailed for South American ports. He will establish branches in Rio de Janeiro, Sao Paulo, Buenos Aires and Santiago (Chile).

## The Roehrig's Transparent Oil-Colors

WE are pleased to announce a new and excellent article for coloring photographs — Roehrig's Transparent Oil-Colors. These are endorsed and sold by leading dealers in New York and elsewhere. Rarely has an article met such instantaneous success. Interested readers are urged to write immediately for descriptive matter, not omitting to mention PHOTO-ERA.

## The Campbell "Universal" Flashlight Outfit

THE E. V. Campbell Company, of Richmond, Ind., announces a new "Universal" Flashlight Outfit which incorporates their popular "multiple-fuse" Ignition System. We regret not to have the space to describe in detail the many good points of this efficient equipment; but we do know that all inquiries addressed to the manufacturers will receive prompt and courteous attention.

## German Photo-Products in England

Two out of the three weekly photographic journals have made their position quite clear with regard to enemy-products, now and after the war. Their pages, like those of *The Photographic Dealer*, will be closed absolutely to any announcements concerning them. Last month, we referred to the fact that the third weekly journal, *The Amateur Photographer*, had not up to that time made any declaration on the subject, and added that, no doubt, this would be forthcoming in an early number. We were, therefore, pleased to see in that journal's issue for July 31 a paragraph entitled, "No More German Goods." Upon reading the said paragraph, however, we formed the opinion that the policy of *The Amateur Photographer* is to express sympathy with every encouragement that can be given British manufacturers for the ousting of German products. To state, "It is in the hands of the British public and the British manufacturers to see to it that no German firm ever gets a hold on the trade of this country again," and, at the same time, to continue to insert advertisements which must obviously serve to keep German good-will alive — as *The Amateur Photographer* is doing at the present time — leaves our poor brain in a confused condition.—*The Photographic Dealer*.

We have already criticized the apparently inconsistent attitude of an English cotemporary towards German-made products — see editorial, "Made in Germany," in our September issue — and are glad to note that, in the main, *The Photographic Dealer* agrees with us.



## The Camera-Man's Audacity

THE direct methods of the American news-photographer can be depended upon to get results. An American camera-man was assigned recently to make a portrait of General von Bissing in the palace of Brussels. The photographer applied for permission of the authorities at Berlin, where he was received courteously. After considerable formality, an officer was detailed to accompany him to Brussels. An appointment was made and, in course of time, the two were admitted to the General's room. It was explained to the American that in no circumstances was he to address the General. The officer began his explanation, but became nervous and confused in finding himself face to face with so distinguished a personage.

"Your Excellency," he began, "we have come from Berlin. That is — if you will be so kind —" and in his confusion he came to a full stop.

General von Bissing was seated at a desk and evidently was very busy. The American photographer stepped forward.

"General, I am an American," he began, without embarrassment.

"I see that," said the General, with a smile.

"And I have come to take your picture," he added, without waste of time.

The situation was unprecedented. Every rule of military formality had been broken. The officer stood aghast. General von Bissing, like most men in positions of great responsibility, is very democratic, and gets his results by the most direct methods.

"Very well," he replied, "go ahead. What do you want me to do?"

"If you will step to the window," the camera-man explained. "Now, a step this way; a little farther, please. No, this way;" and to the horror of the attending officer the photographer laid his hand on the General's arm and arranged the pose. The picture was taken in a few seconds.

"Thank you, General," said the unabashed camera-man easily.

"I hope your picture will turn out well," replied General von Bissing, pleasantly, and the interview was over.

Once outside the door, the officer expostulated.

"How did you come to address his Excellency? It is most unprecedented. And you laid your hand on him. How could you do so?"

"Mein lieber Freund," said the American. "I have photographed three American presidents, and a general, more or less, is nothing to me."

From "THE CAMERA-MAN," The Century Co.

## Herbert W. Gleason's Illustrated Lectures

HERBERT W. GLEASON, of Boston, has earned well-merited praise for the high artistic quality of his illustrated lectures. Connoisseurs, wherever Mr. Gleason has lectured, declare his stereopticon-views, whether in colors or monochrome, remarkable for artistic and technical beauty. His accompanying descriptions are exemplary in point of charm and accuracy, and every lecture is a delightful and instructive entertainment. Mr. Gleason will lecture, this season, in the larger cities of New England; also in Brooklyn, New York, Washington, Pittsburgh, Chicago, Minneapolis and elsewhere. The topics of his lectures are: "Wild-Flowers of New England;" "John Muir and the Mountains of California;" "Wild-Flowers of the Pacific Coast;" "Alaskan Glaciers;" "Mushrooms and other Fungi;" "Rambles in Bird-Land;" "The Spell of the Desert."

Readers of PHOTO-ERA, whether camerists or not, should attend some of these lectures — all, if possible.

## Recent Photographic Patents

Reported by Norman T. Whitaker

THE following patents are reported expressly for the PHOTO-ERA MAGAZINE from the Patent-Law Offices of Norman T. Whitaker, Suite 22, Legal Building, Washington, D. C. (opposite United States Patent Office), from whom copies of any one of the patents may be obtained by sending fifteen cents in stamps.

Earl R. Couden, of Chicago, Ill., has just patented a Folding-Stereoscope. What the inventor claims as new is substantially as follows: A stereoscope comprising lenses, a lens-frame for the lenses, a picture-holder, foldable walls extending from the lens-frame toward the picture-holder and adapted to cut off light from the side of the lenses facing the picture-holder, and a foldable mounting to support the picture-holder spaced from the lens-frame. The number of this patent is 1,199,965.

Patent No. 1,200,819, for a Photographic Apparatus for Use in Aërial Navigation, has been granted to Giulio Douhet and Ernesto Zöllinger, of Turin, Italy. Patentees claim as follows: In a photographic apparatus for aëro-craft the combination with the camera-body, its lens and film-rolls, of a continuously operating shaft, means to automatically wind the film from one roll to the other driven by said shaft, and means controlled from said shaft to momentarily stop the film during its exposure and simultaneously stop the winding-means.

Franz Harress, of Schlebusch, Germany, has just been granted a patent on a Device for Determining the Speed of Aircraft, which he claims as new. It is substantially as follows: Mechanism for ascertaining the speed of aircraft for determining the angle for launching projectiles from the latter, comprising an optical system having a universal suspension maintaining the optical axis at a constant angle with respect to the vertical, and a plate arranged in the focal plane of the objective and having perspective longitudinal and transverse divisions parallel and perpendicular respectively to the direction of flight. This patent has been assigned to the firm of Sprengstoff A. G. Carbonit, of Hamburg, Germany. The number of this patent is 1,201,580.

A Picture-Projecting Machine has just been patented by Laban Leslie Headley, of Philadelphia, Pa. The number of this patent is 1,201,727. The inventor claims as his invention, in a picture-projecting machine, the combination of a frame, means to support and guide a picture-film having marginal sprocket engaging openings therein, a shaft provided with a sprocket-wheel adapted to actuate a picture-film guided by said means, a motor-actuated driving-shaft, a spring connecting said shafts and adapted to be actuated by the driving-shaft and to actuate the first-named shaft, and automatic means to stop the turning of the first-named shaft against the action of said spring and to permit it to be turned by said spring at certain intervals, the last-named means comprising a toothed wheel carried by the first-named shaft, and movable stop pins actuated by the driving-shaft and cooperating with the toothed wheel. Mr. Headley has assigned eleven-twentieths interest to Mone R. Isaacs, of Philadelphia, Pa.

Patent No. 1,201,813, for a Device for Viewing Motion-Pictures, has been patented by William R. Fitzwilliam, of Chicago, Ill. The gist of the inventor's claims is as follows: A device of the class described, comprising a pair of sighting-tubes, and a plurality of variously colored transparencies adapted to successive registration with said sighting-tubes, substantially as described.



## LONDON LETTER



THE International Exhibition of the London Salon of Photography is already closed. The show was undoubtedly a good one, but if the "combing-out" had been rather more drastic, and the number of prints reduced to something under 300, instead of nearly 400 — 394, to be exact — the standard would have been raised decidedly. Screens of pictures were arranged down the middle of the room, which always gives this gallery a crowded appearance. There were 179 exhibitors, 88 of whom came from the British Isles, 53 from the U. S. A. and 35 from all other countries, including the Dominions. Sweden, Portugal and Japan send a goodly number of exhibits; but the last of these has not yet got a serious grip of photography, pictorially speaking, and we miss any attempts at reproduction by the camera of the essential and original art of Japan. It would be a pity, indeed, if Nippon did not evolve a photographic standard of her own, but only — as at present — imitated Western ideas and methods both in subject and expression.

Among American workers, Miss Williamina Parrish has three prints of striking interest. Her head-study, called "Sacha," is a remarkably clever, strong photograph of charcoal-like effect. This broad treatment of subject is seen at its best on an exhibition-wall, and the Salon Committee has hung it well. There are color-prints by M. Demachy hung at intervals all around the gallery. Some of them are very charming, but few are free of much and obvious hand-work; and one feels that if only this gifted Frenchman would keep a little closer, in his pictures, to what we presume is a photographic basis, his work would be even more interesting. But this is not the place to go into a detailed description of the pictures, and we have only attempted to suggest the general lines of the present exhibition.

The show now on at the Camera Club is one of photographs, which are by that young and clever photographer, Hugh Cecil, whose portrait-work is now well known in London. In the matter of years, he is the youngest of the three talented amateur-photographers who have gone into photography as a profession, though he is the eldest in professional experience. The other two, Mr. Arbuthnot and Mr. Bertram Park, were still amateurs when Mr. Cecil started his top-floor studios in Victoria Street.

One of the cleverest things in the Salon, this year, is his study of "Denis Eadie as Disraeli;" but when you praise any of his stage-portraits to Mr. Cecil he always assures you that it has nothing to do with him, and nearly convinces you that achieving pictorial and original photographs is an automatic process as far as the photographer is concerned, and it is the artists who are responsible for the brilliant results!

As is the case with all amateurs who turn professionals, Mr. Cecil heaved some deep sighs at the limitations that working for money entails, and how ideas have to be modified continually and compromises made. We are quite familiar with this wail, and no doubt it is true; but all the same, if it were not for the stimulus of making a career, much good work would be left undone, and, after all, photography is more a craft than an art.

The present president of the Camera Club, the Earl of Carnarvon, is a photographic enthusiast, and is interesting himself very much in the club. The studio had become deserted in the evenings, for with its arc-light and its big windows it would soon have caused a police-raid now that our lighting-orders are so strict.

As the evening is the only time that many of the members are free to make use of it, Lord Carnarvon has undertaken the task to make it absolutely light-tight, only in the inverse manner to a darkroom. The Camera Club Studio is now brilliant inside, but is such an absolutely black spot in the landscape — if one can call roofs and chimney-pots by such a name — that it would almost defeat its object by attracting bombs! Mr. Birchell — one of its members who now has a commission in the Flying Corps, and is invalided home on account of eye-strain — had some interesting things to tell about aerial photographic work. One has often heard, lately, of our remarkable efficiency in the control of the air, and also of the valuable work done by that section of the R. F. C., which is concerned solely with the photography connected with it. One had heard tell that in this respect we were ahead of our enemies; but with British complacency we had accepted the fact, and, if we thought about it at all, concluded that it had to do with dash and luck. We heard from Mr. Birchell, however, a good many interesting details about this photographic branch of the service. It appears that there is little luck about it, and it is entirely due to dogged and severely hard work, so that only the most physically strong can endure the strain. The men work in underground dugouts often fifteen to eighteen hours a day, sleep a few hours from pure exhaustion and then go at it again. So practised have they become, that many thousands of prints are distributed each day, and the output of one man reaches 75 bromide enlargements in an hour — prints, too, with marvelous detail and of wonderful quality; for it stands to reason that the photographs would be valueless for their particular purpose unless they were perfect technically. We are not beating our enemy without sacrifices, however, and even Mr. Birchell may lose the sight of one eye.

The *Gazette* of the Third London General Hospital is still going strong, with Ward Muir as its editor. It is acknowledged universally to be far and away the best of these publications, which, owing to the increase of hospitals, are now quite numerous. The editor naturally interests himself in the photographic illustrations — no number ever appears without them — and this month they are mostly his own work. We are shown the patients listening to the band, and the Mesopotamia party marching out. Private Ward Muir has spent a short leave with us lately, and, like many others who have been in the army since the early days, has settled down to his job, and as far as possible returned to old interests, a big one with him being photography. He is going to try some photographic work in the hospital, and has procured a Graflex from the Kodak Company with which to make a start. He tells us that there is any amount of material at hand in the wards.

The Press-Photographers' Association has been discussing the issue by the Government of official photographs of the wrecked Zeppelins. The P. P. A. is naturally against such procedure, as it interferes with the work of its members, whose photographs of enemy and aircraft are not allowed to be published. We sympathize with their point of view, but no doubt in present circumstances there is a good deal to be said for the Government, especially as its official photographs are extremely good, no doubt partly owing to the advantages given to their photographers.

CARINE AND WILL CADBY.

It is, indeed, a pleasure to hear again from our good friends, the Cadbys. We feel sure that the readers of PHOTO-ERA appreciate the difficult conditions under which the Cadbys are writing. May we continue to hear from them without interruption!



## Photo-Era a Reference-Library

(Continued from October issue)

THERE is no better reference-library of photography than that provided by back numbers of PHOTO-ERA. The variety of subjects treated has been great; the writers include the best authorities and most successful practical workers, both professional and amateur, and most of the articles are illustrated. Regular readers who have kept a file of the magazine, or had each volume bound, will find the appended classified lists and those to be published in subsequent issues of value for reference. **Missing copies may be had at 25 cents each as long as the supply lasts.**

### FLASHLIGHTS

Flashlights	Katherine Bingham	Feb., 1915
Flashlights	Katherine Bingham	Mar., 1914
Floral Photography by Artificial Light	Leon Jeanne	Mar., 1913
Interiors by Flashlight in the Home	David Bevan, M.D.	Feb., 1913
Flashlight	Katherine Bingham	Feb., 1913
At-Home Photography by Flashlight	David J. Cook	Dec., 1912
A Few Remarks on Home-Portraiture with Artificial Light	Nathan T. Beers, M.D.	Dec., 1911
The Instantaneous Flashlight and Its Uses	E. F. Keller	April, 1909
Notes on Flashlight-Portraiture	F. J. Mortimer, F.R.P.S.	Feb., 1907

### HOME-MADE DEVICES

A Home-Made Adjustable Daylight Enlarger	Bruce Keith	Sept., 1915
An Enlarger for the V. P. Kodak	F. W. Bassett	Sept., 1915
An Efficient Finder	John L. Wellington	Aug., 1915
An Automatic Photographic Plate-Washer	William Fuchs	July, 1915
A Home-Made Copying- and Enlarging-Camera	James Thomson	May, 1915
A Reflecting-Hood for the View-Camera	H. E. Balfour	Mar., 1915
A Parabolic Reflecting- and Enlarging-Lamp	F. A. Fahrenwald	Feb., 1915
A Practical Flashlight Apparatus	Walter S. Meyers	Jan., 1915
Photography without a Microscope	E. J. Wall, F.R.P.S.	Jan., 1915
A Simple Device for Making Enlargements	R. W. Dodson	Dec., 1914
An Amateur's Printing-Box	Cavett V. V. Turner	Nov., 1914
Preserving the Vacation-Pictures	William S. Davis	Oct., 1914
Washing Prints and Negatives at Home	James Thomson	Aug., 1914
Home-Made Trays	James Thomson	Dec., 1913
Rehuilding the Camera	Philip Prescott Frost	April, 1913
A Table on the Darkroom-Door	J. G. Allshouse	April, 1913
Enlarging with a Box-Camera	Lehman Wendell	Mar., 1913
Photographic Home-Amusements. I	Wilfred A. French	Jan., 1913
Photographic Home-Amusements. II	Wilfred A. French	Feb., 1913
Photographic Home-Amusements. III	Wilfred A. French	Mar., 1913
How to Make an Enlarging-Lantern	William S. Davis	Oct., 1912
Adapting a Short-Focus Camera to Copying and Enlarging	William S. Davis	Nov., 1911
A Home-Made Apparatus for Enlarging from Nature	John L. Wellington	May, 1911
A Postcard-Frame	William S. Davis	Mar., 1911
Home-Made Plate-Sunk Mounts	I. W. Blake	June, 1910
A Home-Made Paper Developing-Box	Earl Fullerton	June, 1910
A Home-Made Print-and Negative-Washer	J. G. Allshouse	May, 1910
A Modified Kodak	Wilfred H. Schoff	April, 1910
A Large Plate-Adapter for Small Cameras	H. E. Balfour	July, 1909
An Impromptu Safe-Light	A. E. Swoyer	May, 1909
Enlarging with your Own Camera	Edward C. Day	Feb., 1909
Photo-Micrography with Simple Apparatus	William S. Davis	July, 1908
A Handy Print-Mounting Guide	I. W. Blake	Oct., 1907
Daylight Enlarging with a Pocket-Camera	E. R. Plaisted	Oct., 1907
How to Make and Use a Duplicator	John Boyd	Sept., 1907
A Rapid-Action Printing-Frame and Its Possibilities	O. von Engeln and O. H. Todd	Sept., 1907

### WORKING IN MINIATURE

The Grain of Negatives	E. J. Wall, F. R. P.S.	April, 1915
The Choice and Use of a Miniature Camera. I	C. H. Claudy	April, 1914
The Choice and Use of a Miniature Camera. II	C. H. Claudy	May, 1914

The Choice and Use of a Miniature Camera. III	C. H. Claudy	June, 1914
Disadvantages of Working in Miniature. I	David J. Cook	April, 1908
Disadvantages of Working in Miniature. II	David J. Cook	May, 1908
Disadvantages of Working in Miniature. III	David J. Cook	June, 1908

### SNOW-SCENES

Some Notes on Winter-Subjects	William S. Davis	Dec., 1915
Winter Street-Scenes	Katherine Bingham	Nov., 1915
Winter-Landscapes	Frederick F. Ames, Jr.	Feb., 1915
Winter-Scenes	Katherine Bingham	Dec., 1914
Winter-Sports Photography	Will Cadby	Feb., 1914
Snow-Scenes	William S. Davis	Feb., 1913
The Adventures of a Winter-Night	Phil M. Riley	Jan., 1913
Winter-Activities	Virginia F. Clutton	Nov., 1912
Snow-Landscapes	Will A. Cadby	Feb., 1912
Photography in Winter	Rupert Bridge	Jan., 1912
The Autochrome in Winter	Alfred Holmes Lewis	Jan., 1912
In the Good Old Winter-Time	Julian A. Dimock	Feb., 1911
Picture-Making in the Snow	Will Cadby	Feb., 1911
Speed-Photography in Winter	C. H. Claudy	Jan., 1911
Photography of the Snow	W. B. Post	Mar., 1910
Landscape-Photography in Winter	Phil M. Riley	Dec., 1908
The Photography of Snow-Landscapes	W. Rawlings	Jan., 1907

### A Humorous Dual Vocation

In a recent issue of *Photography and Focus*, "The Walrus" writes amusingly about dual vocations, and especially about a British genius who divided his attention between photography and dentistry. "It is a well-worn fib for people to say they would as lief go to the dentist as to the photographer; in this case they would have no choice but to go to both at once. The combination of dentistry and photography has much to recommend it. Many a man with a gnawing grinder would screw up his courage to pass the dual portal, and at the last moment declare that he had just dropped in for a sitting. He would have to drop in again later on about that tooth, and the dental-photographer would register a hit with both barrels. On the other hand, a lady who had genuinely entered on a photographic errand might be tactfully persuaded that, lovely as the resulting portraits would undoubtedly be, they would be still more transcendently beautiful (note the subtle syllable dentally) if she would postpone the sitting until she had been fitted up with a complete upper and lower set, warranted sound in fang and gum, absolutely indistinguishable from nature's best product, and fully guaranteed to crack nuts. A man who entered with a cheek like a prize pumpkin, and a pain several sizes too large for him, could not profitably be approached on the subject of portraiture; but when the incisor had been excised, and the balloon-cheek deflated, he would be in just the mood for a dozen oil-painted enlargements at a fancy price. And a patient still partly under the influence of gas could be bamboozled into signing an order that would keep the forceps manipulator busy for weeks at the other branch of his business.

"If misery acquaints a man with strange bedfellows, photography drives a man to strange side lines. I wonder what is the most curious and incongruous combination, photography and — what?"



In old works on dryplate-making, a trace was often recommended in the emulsion; but how far it is now used in that direction outsiders have no means of knowing.

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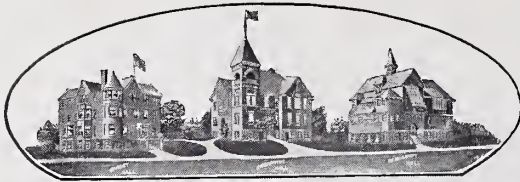
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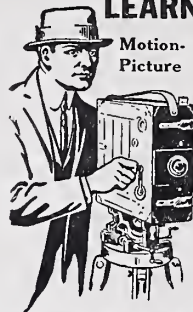
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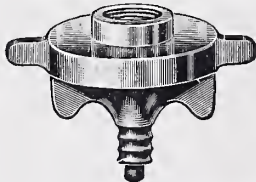
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## PATENTS AND TRADE-MARKS

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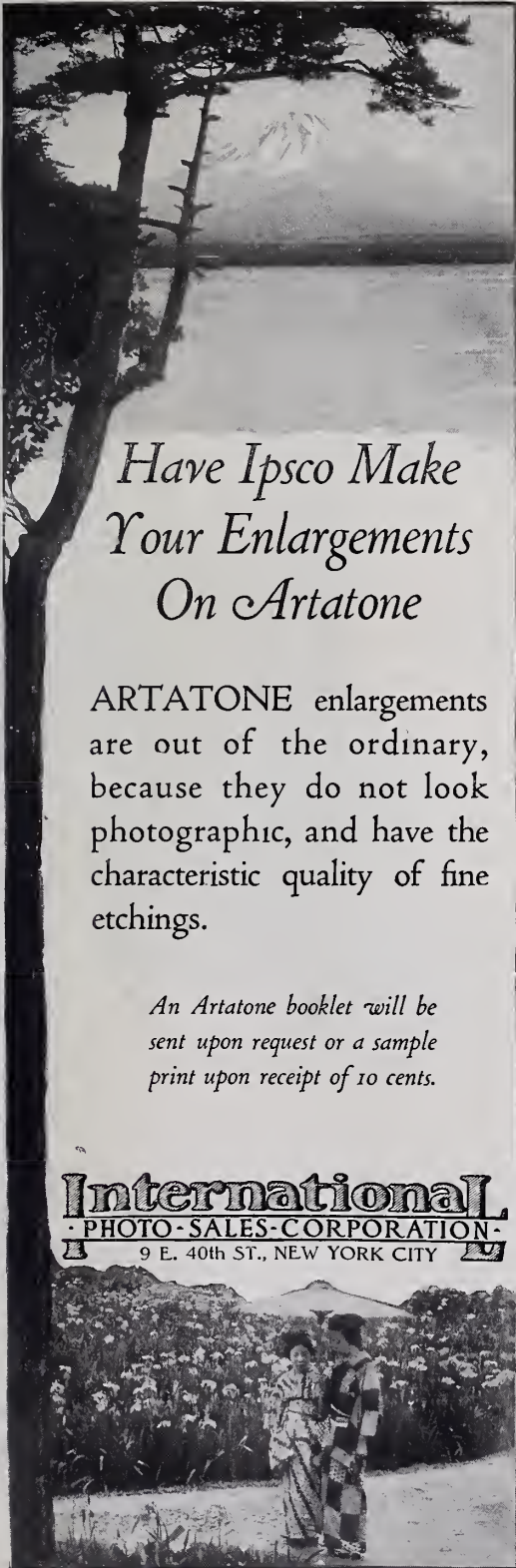
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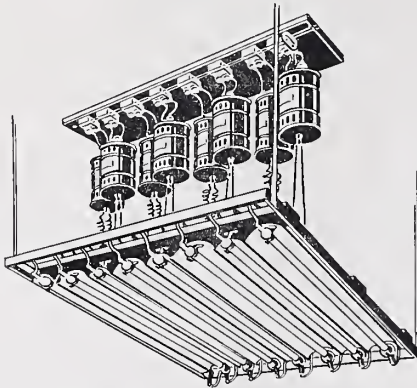
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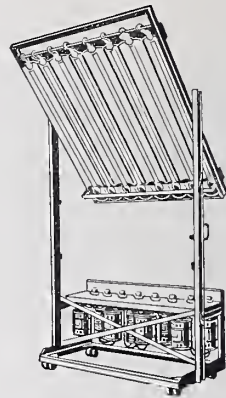
# 399 Varieties of Cooper Hewitt Photographic Outfits

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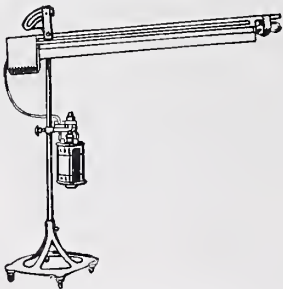
**Skylight-Frame for Studios**

The skylight-frame consists of 50-inch lamp-tubes mounted in porcelain-enamel reflectors in a frame, with the lamp-auxiliaries mounted nearby. Used for portrait-work, lighting-copy and the standard unit for motion-picture studios.



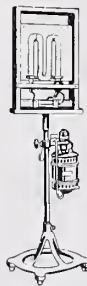
**The Floor-Stand**

Consists of a skylight mounted and stand equipped, changing bodily the elevation and the direction of the light.



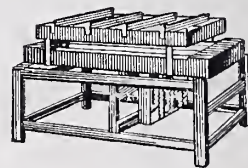
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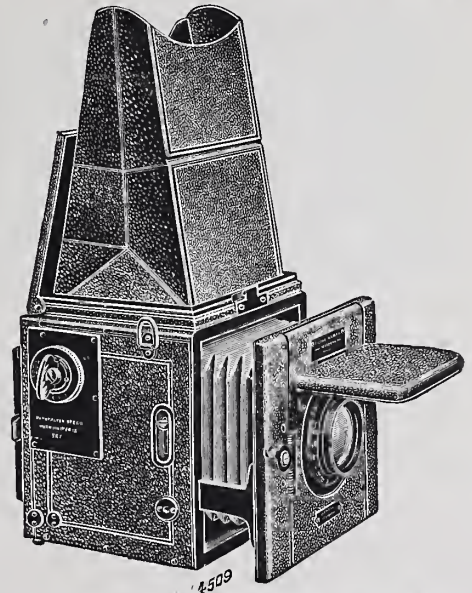
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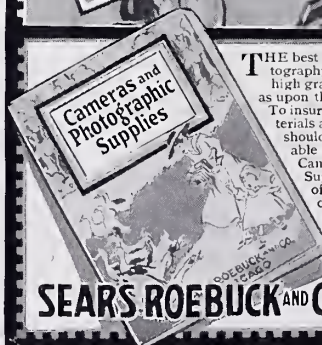
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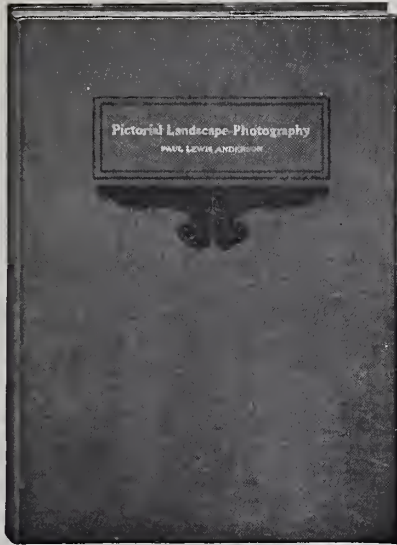
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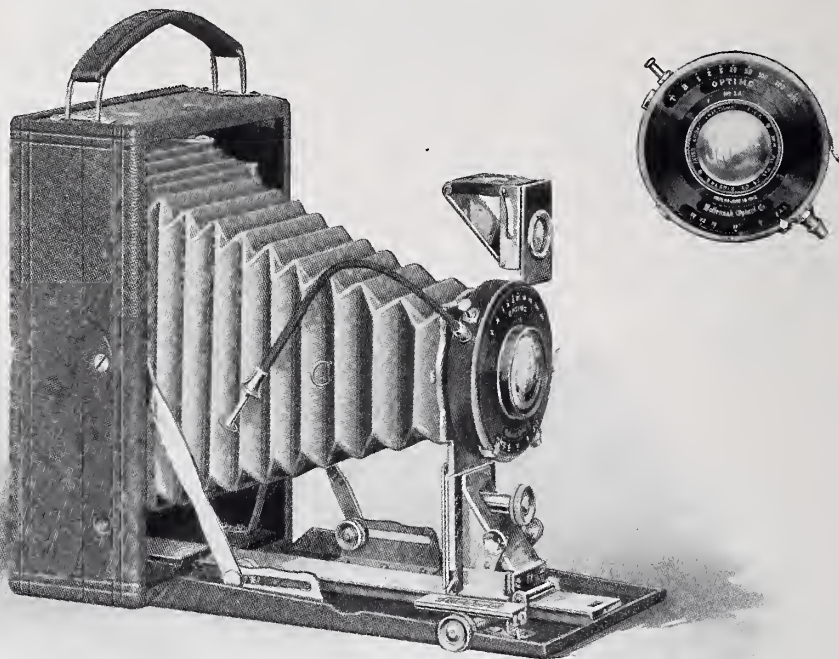
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The Holiday Folder is another effective means of carrying the season's greetings. The folder is made of antique stock in a cream white shade and is printed in red and green with a holiday design of poinsettias on the cover. Within the folder there is a flap under which the print may be mounted and below is an embossed space for the

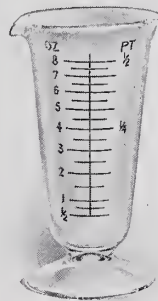


signature of the sender. Enclosed in a neat cream colored envelope the Holiday Folder will more than hold its own in the competition of the holiday mail.

Prints colored with Velox Transparent Water Color Stamps readily lend themselves to this form of greeting

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**2 $\frac{7}{8}$  x 4 $\frac{7}{8}$  inches.**

## THE SIZE THAT FITS THE VIEW.

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There are just two cameras that make this new size picture, the No. 2C Autographic Kodak Jr. and the No. 2C Autographic Brownie. Both cameras are exceedingly compact—the picture they make permits of a slim, easily pocketed instrument—and as long as unusually compact construction was possible, honest workmanship at the Kodak factories did the rest. As both are up to date in every detail, it naturally follows that both are autographic—as in fact are all the folding Kodaks and Brownies.

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No. 2C Autographic Kodak Junior, with meniscus achromatic lens and Kodak Ball Bearing shutter . . . . .	\$12.00
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The Eastman Film Negative Album not only preserves negatives against injury but insures their accessibility on



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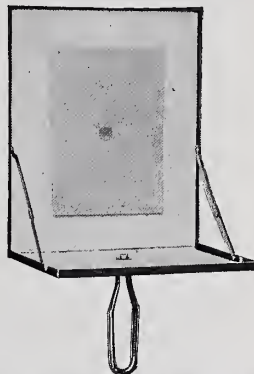
the instant. Each page consists of an envelope of heavy, transparent paper so that when held up to the light the negative shows through. This feature together with the numbers on each envelope and the index at the back, makes it a simple matter to find the negative desired with the utmost dispatch.

### THE PRICE.

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Kodak Flash Sheet Holder, \$1.00

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is oil burning and is fitted with two slides, one of orange, the other of ruby glass. The slides are interchangeable or both may be used when desired. The wick is regulated from the outside and gives a strong, steady light.

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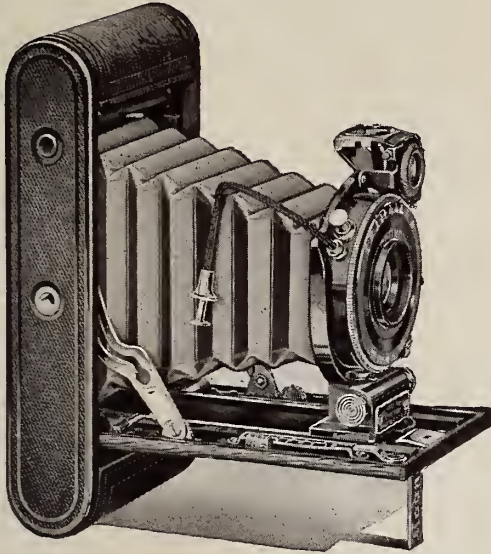
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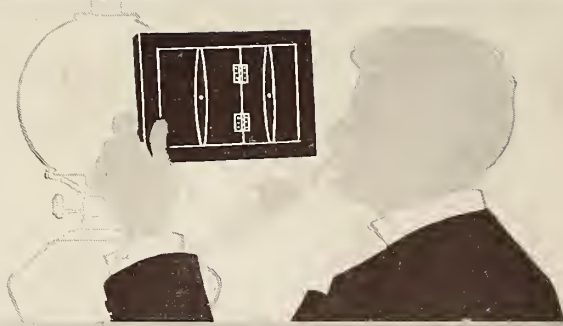
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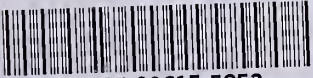








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